Bushfire Mitigation Plan

Powercor Australia Ltd
PAL-PL-0009

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Based on CPPAL Style Guide, PAL-TP-0009 Powercor Plan Template Revision 230317
Document controlled in accordance with ST-1750 INMS Document Management Standard

Table of Contents

List of Figures

List of Tables

1. Plan Introduction

1.1 Contacts

Table 1: Contacts

Responsibility	Title	Address	Contact Details
BMP Responsible Organisation	Powercor Australia Limited (Ltd), ACN 064 651 109	40 Market Street Melbourne, 3000 Victoria	Phone: 13 22 06
BMP Preparation	Network Risk and Assurance Manager	40 Market Street Melbourne, 3000 Victoria	Phone: 13 22 06 General enquiry | CitiPower & Powercor NetworkSafety@powercor.com.au
BMP Carrying Out	Network Risk and Assurance Manager	40 Market Street Melbourne, 3000 Victoria	Phone: 13 22 06 General enquiry | CitiPower & Powercor NetworkSafety@powercor.com.au
BMP Emergency Contact			Phone: 13 24 12 (24 x 7 emergencies and faults contact number for members of the public)

1.2 Regulation Compliance Information

Table 2 provides a cross reference of the sections of the Powercor Bushfire Mitigation Plan (BMP), to the specific items required in Regulation 7 of the *Electricity Safety (Bushfire Mitigation) Regulations 2023*.

Table 2: Regulation Compliance Information

Regulation	7 – Prescribed particulars for bushfire mitigation plans – major electricity companies.	Powercor Plan Reference
7(1)(a)	the name, address and telephone number of the major electricity company;	Section 1.1
7(1)(b)	the position, address, email address and telephone number of the person who was responsible for the preparation of the plan;	Section 1.1
7(1)(c)	the position, address, email address and telephone number of the persons who are responsible for carrying out the plan;	Section 1.1
7(1)(d)	the email address (if any) and telephone number of the major electricity company's control room so that persons in the room can be contacted in an emergency that requires action by the major electricity company to mitigate the danger of bushfire;	Section 1.1
7(1)(e)	the telephone number of the major electricity company that members of the public can call in an emergency that requires action by the major electricity company to mitigate the danger of bushfire;	Section 1.1
7(1)(f)	the bushfire mitigation policy of the major electricity company to minimise the risk of fire ignition from its supply network;	Section 3.1

Regulation	7 – Prescribed particulars for bushfire mitigation plans – major electricity companies.	Powercor Plan Reference
7(1)(g)	the objectives of the plan to achieve the mitigation of fire danger arising from the major electricity company's supply network;	Section 3.2
7(1)(h)	a description, map or plan of the land to which the bushfire mitigation plan applies;	Sections 2.2 & 4.2
7(1)(i)	the preventative strategies and programs to be adopted by the major electricity company to minimise the risk of the major electricity company's supply networks starting fires;	Section 6
7(1)(j)	details of the preventative strategies and programs referred to in paragraph (i) (including details in relation to timing and location) by which the major electricity company will ensure that, in its supply network, each polyphase electric line originating from every zone substation specified in Schedule 1 has the required capacity;	Section 6.5
7(1)(k)	details of testing that will be undertaken before the specified bushfire risk period each year by which the major electricity company will ensure that its supply network can operate to meet the required capacity in relation to each polyphase electric line in accordance with paragraph (j);	Section 6.5
7(1)(l)	details of the preventative strategies and programs referred to in paragraph (i) (including details in relation to timing and location) by which the major electricity company will ensure that, within an electric line construction area, each electric line with a nominal voltage of between 1 kV and 22 kV that is constructed, or is wholly or substantially replaced, in its supply network is a covered or underground electric line;	Sections 6.6
7(1)(m)	details of the preventative strategies and programs referred to in paragraph (i) by which the major electricity company will ensure that, in its supply network, each low voltage overhead electrical cable or wire that is constructed after the commencement of these Regulations in a hazardous bushfire risk area is insulated;	Section 6.8
7(1)(n)	details of the processes and procedures by which the major electricity company will ensure that the major electricity company installs and maintains in operation an Automatic Circuit Recloser in relation to each SWER line in its supply network;	Section 6.7
7(1)(o)	a plan for inspection that ensures that: a) the parts of the major electricity company's supply network in hazardous bushfire risk areas are inspected at intervals not exceeding 37 months from the date of the previous inspection. b) the parts of the major electricity company's supply network in other areas are inspected at specified intervals not exceeding 61 months from the date of the previous inspection.	Section 6.1
7(1)(p)	details of the processes and procedures for ensuring that each person who is assigned to carry out inspections referred to in paragraph (o) and of private electric lines a) has satisfactorily completed a training course approved by Energy Safe Victoria; and b) is competent to carry out such inspections;	Section 6.15

Regulation	7 – Prescribed particulars for bushfire mitigation plans – major electricity companies.	Powercor Plan Reference
7(1)(q)	details of the processes and procedures for ensuring that persons (other than persons referred to in paragraph (p)) who carry out or will carry out functions under the plan are competent to do so;	Section 6.15
7(1)(r)	the operation and maintenance plans for the major electricity company's supply network: a) in the event of a fire b) during a total fire ban day c) during a fire danger period	Section 6.16 to Section 6.21
7(1)(s)	the investigations, analysis and methodology to be adopted by the major electricity company for the mitigation of the risk of fire ignition from its supply network;	Section 8 Section 9.2 Section 9.3
7(1)(t)	details of the processes and procedures by which the major electricity company will; a) monitor the implementation of the bushfire mitigation plan; and b) audit the implementation of the plan; and c) identify any deficiencies in the plan or the plan's implementation; and d) change the plan and the plan's implementation to rectify any deficiencies identified under subparagraph (iii) e) monitor the effectiveness of inspections carried out under the plan; and f) audit the effectiveness of inspections carried out under the plan; and g) before the specified bushfire risk period each year, report to Energy Safe Victoria the results of testing undertaken in that year in accordance with regulation (k);	Section 10.1 Section 10.2 Section 11 Section 11 Section 10.1 Section 10.2 Section 6.5
7(1)(u)	the policy of the major electricity company in relation to the assistance to be provided to fire control authorities in the investigation of fires near the major electricity company's supply network;	Section 6.16
7(1)(v)	details of processes and procedures for enhancing public awareness of; a) the responsibilities of the owners of private electric lines that are above the surface of the land in relation to maintenance and mitigation of bushfire danger; and b) the obligation of the major electricity company to inspect private electric lines that are above the surface of the land within its distribution area.	Section 6.17 Section 6.10
7(1)(w)	a description of the measures to be used to assess the performance of the major electricity company under the plan.	Section 11
7(2)	In subregulation (1)(l),covered, in relation to an electric line, means that a system of insulation is installed on any bare open wire forming part of the electric line.	Section 6.6
7(3)	In subregulation (1)(m)— electrical cable or wire means the whole or any part of a cable, wire or similar thing used or to be used for the	Section 6.8

Regulation	7 – Prescribed particulars for bushfire mitigation plans – major electricity companies.	Powercor Plan Reference
	purpose of transmitting, distributing or supplying electricity, but does not include— (a) any thing enclosing or supporting the cable, wire or similar thing; or (b) a cable, wire or similar thing directly used in converting electrical energy into another form of energy; *Insulated*, in relation to an electrical cable or wire, means an electrical cable or wire that is separated from any adjoining conductive material by a permanently affixed protective layer of non-conductive material.	
7(4)	In subregulation (1)(o), supply network does not include a terminal station, a zone substation or any part of the major electricity company's underground supply network that is below the surface of the land.	Section 6.1.2

1.3 Referenced Documents

All documents referenced throughout this plan except those listed in Appendix G do not form part of the Bushfire Mitigation Plan (BMP).

2. Introduction

2.1 Legislation

Section 113A (1) of the *Electricity Safety Act 1998* requires that a major electricity company must prepare and submit to Energy Safe Victoria (ESV) a plan every 5 years for the mitigation of bushfire in relation to the company's supply network.

In accordance with the *Electricity Safety (Bushfire Mitigation) Regulations 2023* this BMP provides the prescribed particulars as specified in Regulation 7.

A copy of the current accepted bushfire mitigation plan will be available for inspection:

a) on the company's intranet site

b) at the company's principal office in the State during ordinary business hours

c) on the company's website.

2.2 Powercor Australia

Powercor Australia Ltd (Powercor) operates the largest electricity distribution network in Victoria, servicing customers in central and western Victoria, as well as Melbourne's outer western suburbs as shown in Figure 1. Statistics regarding the Powercor distribution network are shown in Table 3.

Table 3: Powercor Distribution Network Statistics

Attribute	Statistic
Network area	145,651 square kilometres
Underground lines	11.2%
Number of poles and towers	617,412
Number of zone substation transformers	155
Number of distribution substation transformers	87,125
Total number of customers	920,608
Customer density	6.3 per square kilometre
Network availability	99.98%

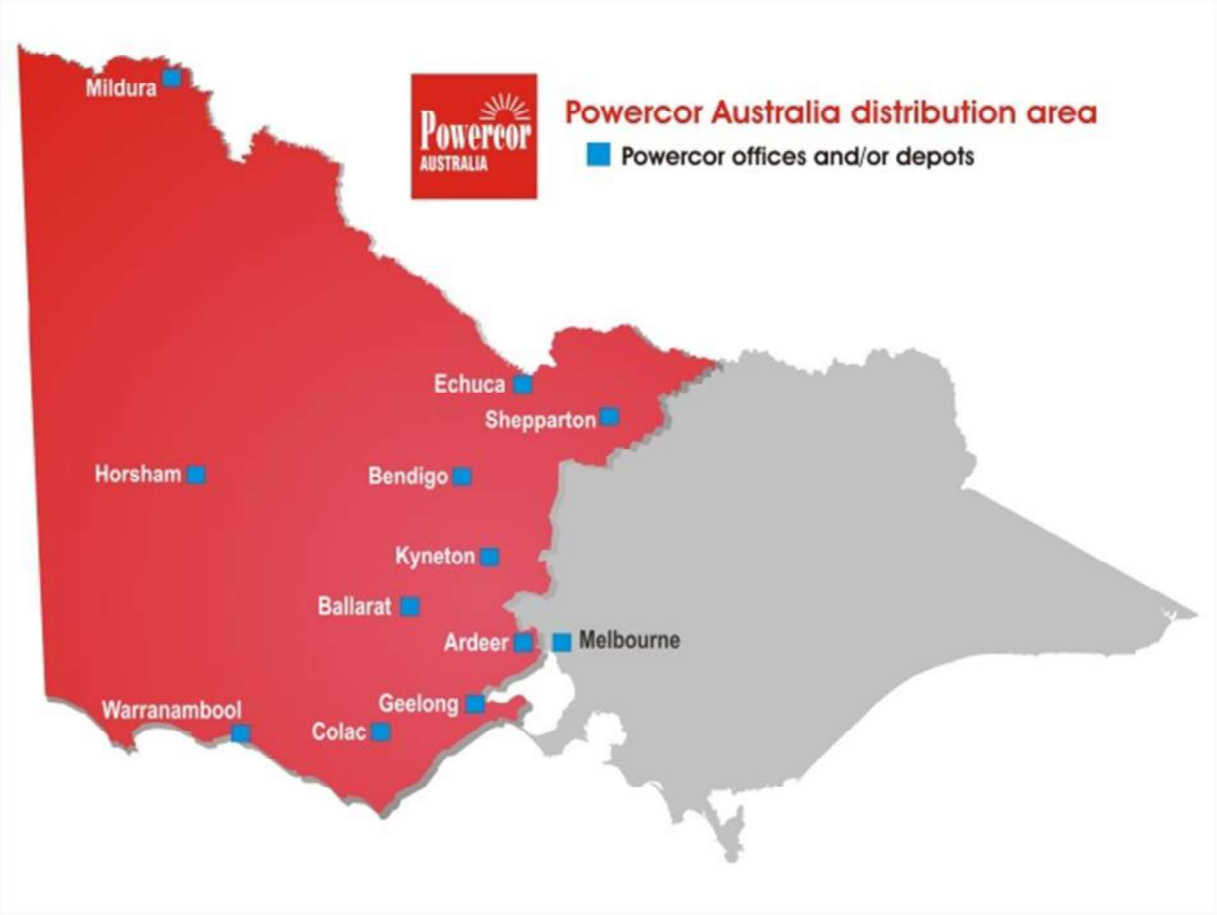

Figure 1: Powercor Distribution Area

3. Bushfire Mitigation Policy & Objectives

3.1 Bushfire Mitigation Policy

In accordance with the Bushfire Mitigation Policy (PO-0003), Powercor is committed to providing our customers with safe, reliable and affordable electricity network services through the application of an effective asset management framework. We are committed to bushfire mitigation activities and making our communities safer. Therefore, we plan, design, construct, operate, maintain, and decommission the network to minimise As Far As Practicable (AFAP) the bushfire danger arising from the electricity network.

3.2 Objectives

The objectives of this BMP are to:

- Minimise the risk of fire starts from electrical assets.
- Achieve compliance with the relevant legislative and regulatory requirements while providing flexibility within the business to encourage innovation, continuous improvement, and the effective use of resources.
- Define the companies approach to the management of the risk of bushfires caused by electricity assets.
- Reference the policies and procedures that explain how Powercor achieves the commitments in the BMP in a single document.
- Demonstrate a high level of commitment to meeting bushfire mitigation responsibilities.

4. Document Scope

4.1 Bushfire Mitigation Framework

Powercor's bushfire mitigation framework is shown in Figure 2 and demonstrates a comprehensive and whole of business approach to what is the biggest risk in the business. The proactive planning and scheduling of this program is based principally on a whole of asset life approach that includes design, construction, operation, maintenance and decommissioning. The annual governance systems of vegetation and asset inspection and maintenance activities are supported by a regime of reporting and auditing.

The continuous improvement elements encompass a large body of proactive capital works, trialling and adoption of new technologies, and our response to audit outcomes.

The response aspects of the plan include our operational processes to faults and Total Fire Ban (TFB) days, asset failure investigations, and fire start reporting.

The framework also has a significant aspect of proactive stakeholder management, including Private Electric Line (PEL) owners, Councils (vegetation management), other agencies, specific community messaging and our ongoing interface with customers.

Figure 2: Bushfire Mitigation Framework

This BMP applies to assets that could cause fire ignition in all areas of Powercor's supply network. Electricity networks have been a source of fire ignition since their construction and consequently a considerable amount of investigation has been and continues to be undertaken into the causes to enable preventative actions to be taken.

This BMP forms part of the Powercor Electricity Safety Management Scheme (ESMS) (JEQA4UJ443MT-173-116) pursuant to section 113D of the Electricity Safety Act.

4.2 Electrical Network Map

The Powercor HV overhead network is shown in Figure 3 and is colour coded as follows:

66kV Sub-transmission Lines

22kV 3 Phase and 1 Phase lines

12.7kV SWER Lines

To maintain clarity, the following is not shown:

- LV overhead network.
- In the small township of Lindsay Point in the far northwest of the state, there is a small system operating at 33kV that is supplied from the South Australian distribution network.
- In the far southwest of the state, there is a small SWER system operating at 19kV supply from the South Australian distribution network.

Full network details are available from Powercor's Geographical Information System (GIS).

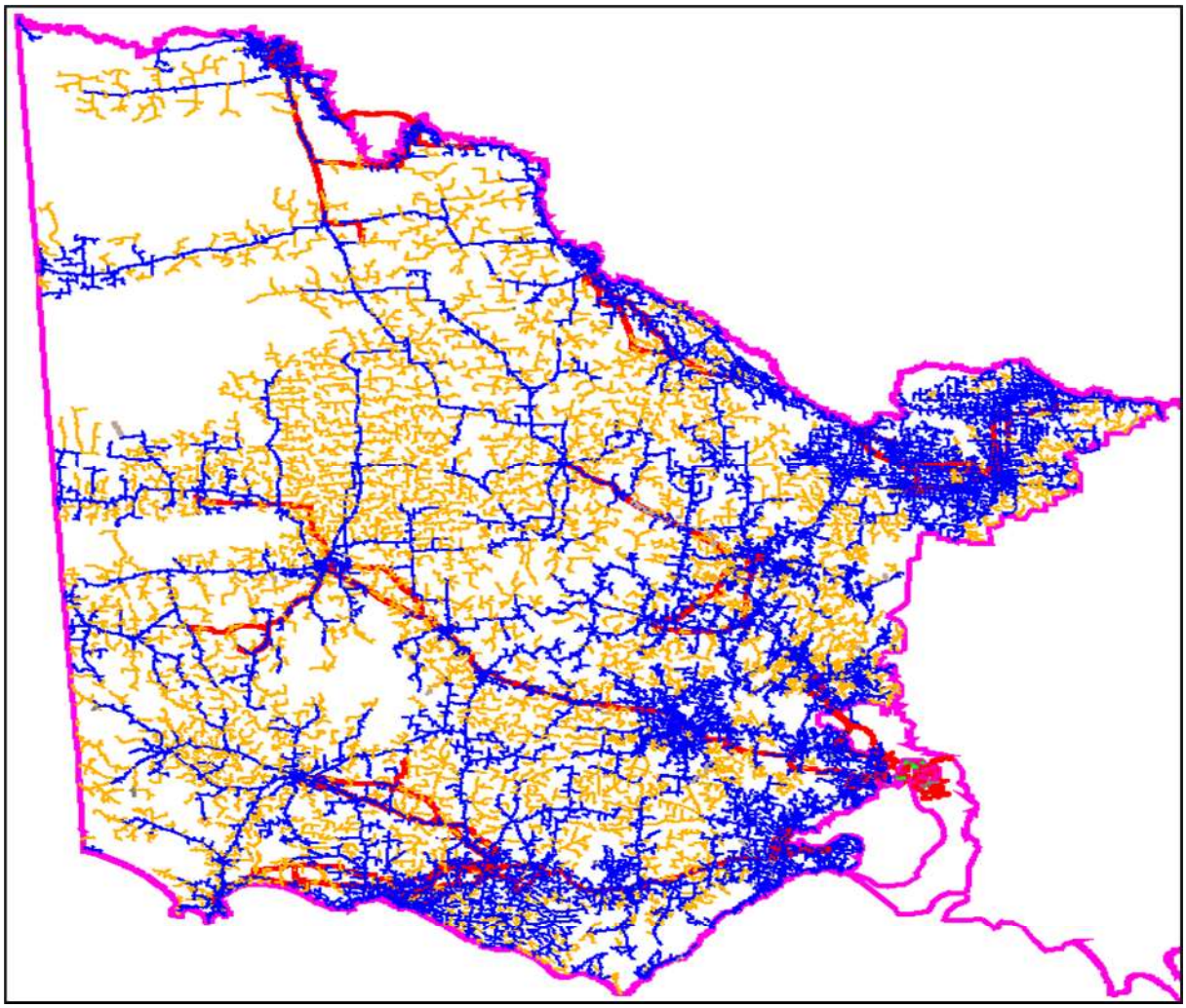

Figure 3: Powercor Overhead Network

4.3 Bushfire Risk Areas

The bushfire risk areas in Powercor's operating region are shown in Figure 4. These areas are updated as part of the Country Fire Authority (CFA) Fire Hazard Mapping Project and may change as areas are reviewed across the state.

Approximately 51% of Powercor assets are located in Hazardous Bushfire Risk Areas (HBRA) based on pole and tower population.

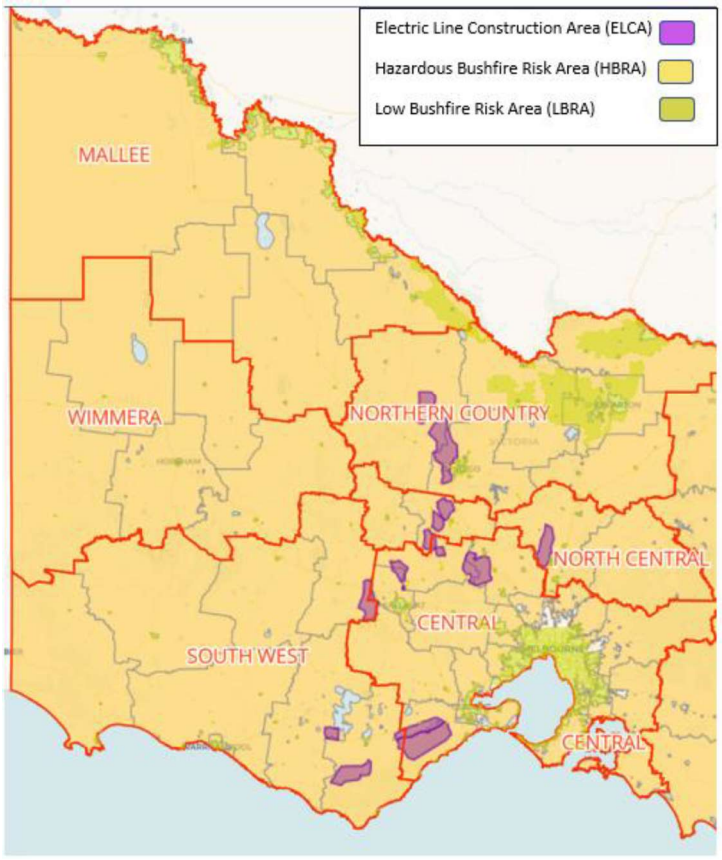

Figure 4: Bushfire Risk Areas

5. Management Structure

The implementation and control of bushfire mitigation related activities are discharged via many roles throughout Powercor. Each role has a position description which lists the key activities. The carrying out of bushfire related activities contained within this plan is overseen by the Network Risk and Assurance Manager.

6. Bushfire Mitigation Strategies and Programs

Powercor has developed policies, strategies, frameworks, plans, procedures, and work instructions to support its bushfire mitigation activities. These are described in the following sections.

6.1 Monitoring Asset Condition

Preventative maintenance strategies have been created for all Powercor zone substation, sub-transmission and distribution assets. These strategies were developed from Reliability Centred Maintenance (RCM) methodologies and involve undertaking on-condition tasks based on a program of condition monitoring of the electrical network assets. The RCM rules are configured in Powercor's Asset Management Enterprise System, SAP, which automatically generates time-based work orders for inspection and maintenance planning.

Operational procedures for developing, reviewing and implementing asset maintenance plans, procedures and policies are set out in:

- Developing, Updating or Retiring an Asset Management Plan (PR-0009). This procedure outlines the process/actions to be followed when a Asset Management Plan (AMP) or Maintenance Policy / Procedure related to electrical network assets is reviewed or a new AMP or Maintenance Procedure is developed.
- Electricity Safety Management Scheme (JEQA4UJ443MT-173-116).

These documents outline how Powercor identifies needs, develops, and manages policies and provides a systematic process through the identification of strategic, operational and program/project level risks to:

- determine accountability for risks
- provide an assessment of controls and the control environment
- analyse and evaluate risks
- manage the risks to AFAP levels.

6.1.1 Pole and Tower Inspection

Powercor is transitioning to a 3-year full inspection cycle in HBRA, replacing the existing 5-year interval and discontinuing the current 2.5-year above-ground-only inspection. Additionally, all Added Controls serviceable (AC Serviceable) poles will transition to a 1-year (+ one month) full inspection cycle, replacing the existing 2-year interval and discontinuing the current 1-year above ground only inspection. This change directly addresses seasonal access challenges, aligns with industry best practice, and minimises the risk of unassisted wood pole failures as far as practicable.

An implementation plan has been developed to support the transition to a 3-year inspection cycle in HBRA and 1-year inspection cycle for AC serviceable poles, which is planned to commence in April 2025, with full compliance expected by June 2028.

There will be no change to the current 5-year full inspection cycle in Low Bushfire Risk Areas (LBRA), continuing to comply with the regulatory requirements.

Pole and tower inspection is carried out in a dedicated program conducted over the cycles (referred to as cyclic inspections) summarised in Table 4.

Table 4: Asset Inspection Cycle

Asset Type	Type of Inspection	Inspection Frequency		
		LBRA	HBRA	Tolerance
All serviceable poles	Full inspection	5 years	3 years	+ one month
AC serviceable poles[1]	Full inspection	1 year	1 year	+ one month
Towers	Full inspection	5 years	3 years	+ one month
	Close inspection	5 years	5 years	+ one month

[1] AC Serviceable Poles are referred to as Limited Life poles in SAP records.

Poles

A full inspection shall include the inspection of electrical assets between poles and/or other structures to include these key activities:

- assessment of pole condition from ground level to two metres above
- visual assessment of pole condition from two metres above ground level to the top of the pole using binoculars
- assessment of pole condition below ground level
- identifying wood destroying insects
- undertaking of preservative treatment of hardwood poles
- assessment of the surrounding area for safety issues.

Towers

A full inspection shall include the inspection of electrical assets between towers and/or other structures to include these key activities:

- visual assessment of all components of a tower and its attachments from ground level to the top of the tower
- assessment of tower footing condition below ground.

A close inspection shall include a close-range detailed inspection and assessment of all above ground components of the tower.

Further information relating to the full inspection of poles and towers is defined within the Maintenance Procedure - Poles and Towers (PR-5062.01).

Operational instructions for the inspection, testing and assessment of assets are contained in the Asset Inspection Manual (CPPAL-MA-0450).

This manual describes the various types of electrical assets and the observations or tests necessary to identify and assess their condition. It also gives a detailed description of items that need to be identified for replacement or repair. The manual sets out criteria for categorising the priority for remedial maintenance actions, and the reporting and information recording requirements.

Operational instructions for the inspection of poles and towers located in inaccessible locations are contained within the Inaccessible Asset Procedure (18–20–P0004) which allows for a risk assessment to be undertaken if the asset is not accessible. The risk assessment considers when access is expected to become available for the inspection and a workflow for the inspection to be completed.

The Asset Inspection Officer is responsible for preparation of the asset inspection program using maintenance plans established within SAP and monitoring of the performance of the asset inspectors in adhering to the program. Each maintenance plan covers all the poles and towers within a specific electrically isolatable section of the network. The management of maintenance plans are contained within the Asset Inspection Procedure (18–20–P0002).

6.1.2 Above Ground Asset Inspection

In addition to the inspection of poles and towers, other above ground assets are also inspected as summarised in Table 5. The Asset Inspection Manual (CPPAL-MA-0450) details all relevant work instructions except for indoor substations and the testing of SWER earths, which are detailed in the Maintenance Procedure - Distribution Transformers (CPPAL-PR-5071.01) and the Distribution Earthing Systems Policy (05-C0001.D290) respectively. Identified defects are assigned repair priorities as detailed within the Maintenance Defect Priority Standard (CPPAL-ST-5060.01).

Table 5: Other Above Ground Asset Inspection Cycles

Asset Type	Inspection Timeframes	
	HBRA	LBRA
Pole type substations and switchgear Pole type substations are visually inspected for condition and ground clearances. Pole mounted switchgear are visually inspected.	3 years (+ one month)	5 years (+ one month)
LV services LV services are visually inspected for condition using stabilised binoculars. Clearances are visually assessed and measured where required with an approved device.	3 years (+ one month)	5 years (+ one month)
Conductors Conductors and associated hardware (such as spreaders and spacers) are visually inspected for condition using stabilised binoculars.	3 years (+ one month)	5 years (+ one month)
LV pillars LV pillars are visually inspected for condition.	3 years (+ one month)	5 years (+ one month)
Ground type substations Ground type substations are visually inspected for condition.	6 months	6 months
Indoor substations Indoor substations are visually inspected and maintained by the completion of inspection tasks to identify defects.	2 years (+/- 3 months)	2 years (+/- 3 months)
Kiosk substations and switching cabinets Kiosk substations and switching cabinets are visually inspected for condition.	6 months	6 months
SWER Earths	2 years	2 years

Asset Type	Inspection Timeframes	
	HBRA	LBRA
Earthing systems associated with Single Wire Earth Return (SWER) isolating substations and distribution substations are subject to routine testing to assess earthing integrity.		
Regulators Regulators are visually inspected for condition.	6 months	6 months
Pole top assemblies Pole top assemblies are inspected for condition from the ground using stabilised binoculars as well as an elevated camera where required. The inspection generally extends from two metres above ground to the pole top and includes assessment of all pole top assets including conductors, insulators, cross-arms, attachments, pole mounted plant and equipment etc.	3 years (+ one month)	5 years (+ one month)

6.1.3 Resistograph Non-Destructive Wood Pole Inspection

In July 2024, Powercor implemented the Resistograph (RESI) drill to replace the traditional intrusive drilling (13mm drill) used in the current sound, dig and drill (SDD) method as part of the normal wood pole cyclic full inspection testing to assess wood pole condition.

The RESI drill works as a resistograph to measure timber resistance from wood poles to detect rot and decay in determining the sound wood thickness of the outer timber.

Powercor has adopted the use of the RESI drill as an alternative to WoodScan, using a 4-Point method for inspection. The 4-point methodology requires the inspection and measurement at 4 locations 90^0 apart and using the average of the 4 measurements to calculate the section modulus of the pole.

Operational instructions for the use of the RESI drill for the internal inspection of wood poles (drilling) to determine the condition assessment of assets are contained in the Asset Inspection Manual (CPPAL-MA-0450).

6.1.4 LiDAR Conductor Clearance Inspections

In line with the annual aerial Light Detection and Ranging (LiDAR) inspection surveys, Powercor has leveraged remote sensing and software tools to generate a 3D digital model of assets and the surrounding environment data to identify potential conductor clearance breaches as described in the Maintenance Procedure – Conductors Aerial Line Clearances (PR-5064.02).

The LiDAR methodology and approach is used to assess overhead conductor clearances at the pole or in-span to ensure minimum clearances are maintained for the following scenarios:

- Conductor to Ground clearances
- Pole Top and Midspan Circuit to Circuit Clearances
- Pole top and Midspan Phase-to-Phase Clearances
- HV/Sub-transmission Phase-to-phase Clearances on all T-on, T-off and two-way T-offs.

The LiDAR excludes capturing conductor clearances from buildings and structures.

As the use of LiDAR technology for determining potential conductor clearance breaches is in its early days of maturity, the LiDAR methodology will be used to complement the existing Powercor cyclic ground-based inspections by asset inspectors for identification of potential conductor clearance defects.

6.1.5 Thermal Imaging

Thermal imaging technology is used to assist identify assets exhibiting elevated temperatures or causing leakage currents. The adoption of this technology can assist prevent asset failures which could result in a fire start.

The thermographic inspection program includes yearly inspection of sub-transmission lines, selected sections of distribution overhead HV feeders, and LV assets in coastal areas.

Thermal imaging is undertaken using vehicle mounted equipment for overhead network assets whilst hand-held devices are used within indoor substations.

Operational procedures for conducting thermal imaging inspections are contained within the Maintenance Procedure – Distribution Thermographic Inspection (CPPAL-PR-5060.01). Procedures for prioritising defects identified through thermal imaging are contained within the Maintenance Procedure – Distribution Thermographic Inspection (CPPAL-PR-5060.01) and the Maintenance Defect Priority Standard (CPPAL-ST-5060.01).

6.1.6 Line Condition Observation Program

To observe compliance with the maintenance procedures, standards and policies outlined in this plan and to help maintain employee awareness, line condition observations are conducted in HBRA across the business leading up and into the declared fire danger period.

Line condition observations are undertaken in addition to the cyclic asset inspection program focusing on targeted sample areas each year, carried out in the lead up to the fire season. Line condition observations utilise the use of drones to capture pole top asset images which are then assessed by desktop assessment. Operational procedures are contained within the Line Condition Program (PAL-PR-0002).

6.2 Priority Classifications

The defect priority classification applies to all defects found on above ground assets. Asset defects identified by the inspection program or reported from internal or external sources are assessed for their associated risk and prioritised for remedial action.

Procedures for reporting network defects are contained within the Maintenance Defect Priority Standard (CPPAL-ST-5060.01).

This standard sets out the criteria for classification of defects as shown in Table 6.

Table 6: Defect Classification

Allocation	Symbol	Allocated to items assessed to be at risk of failure within the following timeframes[1]	Need to be actioned within[1]
Priority 1	P1	0 – 42 days	24 hours
Fault Follow Up 42 Days	FFU42	> 42 days	42 days
Priority 42	P42	42 days – 32 weeks	42 days
Priority 2	P2	32 weeks - 3 years	32 weeks
Priority 3	P3	> 3 years	3 years
Priority Opportunistic	POPP	Not applicable	No set timeframe – actioned on an opportunity basis
Priority Notification for Information	PN	Not applicable	No set timeframe - information record only

[1] Note: all time periods mentioned in the table are based on calendar days.

6.3 Remedial Maintenance

Powercor's maintenance programs are generated from a number of different sources, the main one being the asset inspection program (refer Section 6.1).

Maintenance defects can also be raised via:

- Employees or contractors.
- Customer calls.
- Line condition observations.
- BFM vegetation inspections/audits.
- The "Report It" Application.

Refer Section 10.2 for more information on audits.

Defect Management

Maintenance works identified through the inspection program, audits, observations or raised by customers are issued for remediation. Resources are scheduled to match the needs of the issued projects to achieve the required response times. The defect priority and rectification timeframes are detailed in Section 6.2.

Faults/Fault Follow-up

Operational procedures for the repair of defects identified through the Network Faults/Outage process, including temporary repairs are contained within:

- Manage Network Faults Procedure (JEQA4UJ443MT-149-83)
- Manage Fault Follow-Up and Repair Guideline (JEQA4UJ443MT-149-115).

Customer fault calls are received by the Powercor Customer Contact Centre 24 hours a day, 7 days a week. Likewise, fault calls may also be received by Powercor's System Control Centre directly from asset inspectors, operators, and emergency services. The Dispatch Group has responsibility for prioritising trouble orders and assigning to field crews. Trouble orders are prioritised as either high, medium, or low using the following principles:

- Safety of the public and our workforce.
- Customer satisfaction.
- Supply reliability and quality.
- Field crew workload management – including stand-down impacts.

There are two trouble order classifications:

- No-service (NS) which relate directly to supply issues including all supply fail, part supply fail, dim lights, and intermittent supply.
- In-service (IS) which include faults which may or may not have supply impacts such as wires down, car hit pole, wire low, animal on asset etc.

Priorities assigned to NS trouble orders are generally based on the number of customers impacted as shown in Table 7, however, the priority of the order may change if:

- there is immediate safety risk to the public or employees (priority is assigned as High)
- the customer is a dairy farm or commercial business (priority is assigned Medium).

Table 7: NS Trouble Order Priority Assignment

Customers Affected	Priority
1	Low
2-10	Medium
>10	High

Priorities assigned to IS trouble orders are based on the type of fault, the information in the trouble order and additional information collected during validation. Where there is an immediate risk to public or employee safety, these trouble orders are assigned a High priority.

Where the fault crew have undertaken partial or temporary repairs a Fault Follow-Up repair action is created. All items assigned for Fault Follow-Up are issued to the appropriate work group, scheduled for completion, and actioned within 42 days. In circumstances where the technical review of a Fault Follow-Up item deems there is the potential for a fire start and the item is in a HBRA, a risk assessment is undertaken to determine if any actions are required for a TFB day.

Audits/Observations

Asset defects identified during audits/observations are communicated in accordance with the particular audit process.

Non-Cyclic Maintenance

Maintenance items found out of cycle are reported using the "Report It" Application where defects are prioritised and attended to within the timeframes specified in Table 6.

6.4 Asset Replacement/Modification for Specific Assets

Powercor has several specific BFM related strategies that deal with the replacement and modification of Powercor assets. These include:

- High Voltage Fuses Policy (D-320): High voltage fuse failures can result in fire starts. HV fuses are inspected as part of the cyclic asset inspection program.
- Distribution Surge Arresters Policy (D-540): Surge arresters protect electrical assets from damage which may otherwise result in a fire start. Surge arrestors are inspected as part of the cyclic asset inspection program.
- Maintenance Procedure - Pole Top Assembly (PR-5063.01):
  - Crossarm failures may result in conductors or other associated assets falling to the ground which may result in a fire start. Crossarms and securing hardware, which include crossarm braces, kingbolts and anti-split bolts are inspected as part of the cyclic asset inspection program.

  - Defective high voltage insulators may lead to wooden crossarm and pole fires. These failures may also lead to conductors or other hardware falling to the ground which may result in a fire start. Bird covers provide insulation between live and conductive parts of structures, which prevent bird and animal related faults which may also result in fire starts. These assets are inspected as part of the cyclic asset inspection program.
- Maintenance Procedure - Poles and Towers (PR-5062.01):
  - Poles and towers classified as unserviceable need to be actioned by replacement or repair within the prescribed timeframes. Failure to do so may result in the pole or tower failing and starting a fire. Unserviceable poles and towers are identified as part of the cyclic asset inspection program.
  - Permanent reinforcement systems maintain the functional performance of a wooden pole. Reinforcement systems that fail to perform their intended function may lead to the pole failing and starting a fire. Permanent reinforcement systems are inspected as part of the cyclic asset inspection program.
- Maintenance Procedure – Conductors and Connectors (PR-5064.01):
  - Conductor failures may result in fire starts. Overhead conductors are inspected as part of the cyclic asset inspection program.
  - Spreaders and spacers prevent conductor clashing and hence potential fire starts. These assets are inspected as part of the cyclic asset inspection program.

Defects identified via the above strategies are assigned repair priorities as detailed within the Maintenance Defect Priority Standard (CPPAL-ST-5060.01).

6.5 Rapid Earth Fault Current Limiters

REFCL Installation

To minimise the risk of electricity network assets starting fires, Powercor has installed REFCLs at 22 zone substations as defined in regulation 7(1)(j) of the *Electricity Safety (Bushfire Mitigation) Regulations 2023*. Each polyphase line originating from the zone substations have been commissioned to meet the required capacity as defined in regulation 7(1)(k) of the regulations.

REFCL Performance and Capability Assessment

To demonstrate compliance with the legislated performance standard (required capacity), Powercor conducted an Initial Capacity Test (ICT) programme upon commissioning of each REFCL protected zone substation prior to the legislated completion date. This programme of work demonstrated that each polyphase electric line originating from the substation has the required capacity, and that the nominated substation is a complying substation.

All complying zone substations are subject to an Annual Capacity Test (ACT) prior to the specified bushfire risk period to demonstrate that each polyphase electric line originating from the substation is compliant with the required capacity.

Powercor will notify ESV prior to all compliance testing and provide the opportunity to observe the testing.

Operational procedures to conduct the Initial and Annual Capacity Testing are contained within the following documents:

- Policy for Initial Capacity Testing (CP_PAL_REFCL_101)
- Policy for Annual Capacity Testing (CP_PAL_REFCL_102)
- Demonstration of Required Capacity (CP_PAL_REFCL_103)
- Capacity Test Locations (CP_PAL_REFCL_104)
- Facilities for REFCL Performance Testing (CP_PAL_REFCL_105)
- Consideration of Influencing Factors (CP_PAL_REFCL_106)
- Resolution of Conditional Acceptance (CP_PAL_REFCL_302)
- Consideration of GFN Settings (CP_PAL_REFCL_303)

Results will be submitted noting the document version number used for the testing undertaken. Any amendments to these documents and the annual testing requirements are subject to ESV acceptance.

Completed assessments for each commissioned location will be submitted to ESV as part of the annual pre-summer reporting requirements.

Powercor will undertake bi-annual forecasts of network capacitance growth to identify risks in maintaining the required capacity. Significant projects required to mitigate performance risks from growth in network capacitance will be detailed in the Distribution Annual Planning Report (DAPR).

Operating Modes

Powercor has configured two available operating modes for REFCL protected networks:

1. Fire Risk Mode – This mode utilises the Soft Fault Confirmation technique which minimises let through energy.

a) When a fault is detected the REFCL compensates and reduces the voltage on the faulted phase to (<250V) at the zone substation 22kV bus.

b) After a configurable delay time, Powercor's control relay requests a Soft Fault Confirmation test to confirm both the permanence of the fault and the identity of the faulted feeder.

c) If a permanent feeder target is identified, either the affected feeder circuit breaker or nearest upstream REFCL compatible smart ACR (which has observed passage of the fault) are directly tripped.

There is a tangible customer impact when operating in this mode due to the loss of protective discrimination. Feeder based protective devices such as legacy ACRs and fuses will not operate, and so all customers on a feeder are disconnected regardless of fault location.

2. Bypass Mode – This mode reverts to conventional earthing when the REFCL system identifies a permanent fault.

a) When a fault is detected the REFCL compensates and reduces the voltage on the faulted phase to (<250V) at the zone substation 22kV bus.

b) After a configurable delay time, Powercor's control relay requests a confirmation test to confirm permanence of the fault.

c) If a permanent feeder target is identified, the Low Impedance Ground circuit breaker is closed.

Restoring the Low Impedance Ground permits the operation of conventional current based discriminant earth fault detection schemes such as fuses and fault passage indicators.

Bypass mode offers the following potential benefits:

- Expedited fault finding and fault restoration due to fuse and fault indicator operation.
- A platform to retain the REFCL system in service outside the fire season. This ensures the REFCL protected network remains appropriately hardened leading into the following fire season.

If the bypass sequence is unable to clear the earth fault, the Station Earth Fault Management (SEFM) scheme shall reconfirm the affected feeder, lockout the bypass sequence and directly trip the affected circuit breaker. This action removes a potential risk to public safety where an uncleared high impedance fault could remain on the network. Additional customer impact is likely when all customers on a feeder are disconnected regardless of fault location.

REFCL Sensitivity

Earth fault sensitivity is an independent consideration to the selected operating mode. Powercor's REFCL system is designed to be capable of three independent setting groups for earth fault detection and these can be individually configured and selected for a given application.

Table 8 summarises the intended REFCL earth fault sensitivity target for each setting group.

Table 8: REFCL Sensitivity Groups

Setting Group	Sensitivity	Comments
1.	25.4 kΩ	Sensitivity at the threshold defined by required capacity (0.5 A)
2.	≈12.7 kΩ	Very high level of earth fault sensitivity (≈1.0 A)
3.	≈6-8 kΩ	High level of earth fault sensitivity (≈1.6 - 2.1 A)
No REFCL	≈1.4kΩ	Typical current based SEF protection (≈9A)

REFCL Application

Powercor has deployed REFCLs with the intention of targeting the maximum level of bushfire safety performance whilst maintaining operational capability of the network where possible, having regard to the safety and other benefits of customers not losing electricity supply. The choice of operating mode is determined by the relative fire risk and the condition of the network.

REFCL settings are optimised for fire safety and are applied to supplied networks within TFB or Catastrophic declared areas.

Should the REFCL detect a permanent phase to earth fault on a TFB or Catastrophic day it will compensate for up to 20 seconds before interrupting supply to the affected distribution feeder. Instructions for the restoration of supply is contained within the Total Fire Ban Day Action Plan (PAL-PL-0009.1).

During the declared fire season, but outside periods of heightened fire risk (TFB or Catastrophic day), REFCLs may be operated at reduced levels of sensitivity. This may also apply to those heightened fire risk days where operational switching, customer supply and network constraints require it.

Table 9 lists the REFCL settings that Powercor will use in different conditions subject to various exceptions.

Table 9: REFCL Application on Powercor 22kV Polyphase Networks

Condition	Operating Mode	Setting Group	Explanation
TFB Days, including when fire danger rating is "Catastrophic" when FDI is 30 or greater	Fire Risk	1	Configured to provide the optimal settings for bushfire safety. This aligns with the application of ACR and feeder protection enhancements for high fire risk conditions.
TFB Days when FDI is below 30 **Fire Danger Period when fire danger rating is greater than "Moderate"**	Fire Risk	2	The combination of Fire Risk mode and Setting Group 2 provides superior earth fault protection whilst maintaining operational flexibility of the network.
Fire Danger Period when fire danger rating is "Moderate" and "No rating"	Fire Risk	2	The combination of Fire Risk mode and Setting Group 2 provides superior earth fault protection whilst maintaining operational flexibility of the network.
	By-pass	3	Bypass mode may be used for fire danger ratings "No rating" and "Moderate" during the declared fire danger period to enable fuse and fault indicator operation, which will expedite fault finding and fault restoration.
All other times outside of Fire Danger Period	By-pass	3	By-pass mode will be used outside the declared fire danger period.
Operational Switching, including for fault finding	All	3	Operational switching activities on the 22kV network will be undertaken using Setting Group 3. By-pass mode may be used to facilitate fault finding in accordance with operational procedures. Operational switching, including for fault finding is applicable to all the above stated conditions. On declared days of high fire risk, the REFCL may be taken out of service or moved to By-pass mode to facilitate fault finding where restoration of customer supply is the overwhelming objective (including the temporary connection of generators) in accordance with Section 5.13 of the Total Fire Ban Day Action Plan (PAL-PL-0009.1).

REFCLs and High Voltage Customers

The Essential Services Commission (ESC) conducted a *Review of Voltage Standards for Bushfire Mitigation* in 2018. The outcome of the review changed the responsibility for REFCL-ready works from Distribution Businesses (DBs) to High Voltage Customers (HVCs).

This change has left three types of HVC connection on Powercor's REFCL networks:

1. Customers isolated through a Powercor owned and operated HV isolation transformer.
2. Customers isolated through their own HV isolation transformer on the customer side of the connection point.
3. Customers who have electrically "hardened" their assets and are not isolated from the REFCL protected network.

In considering our obligation to deliver safe and reliable electricity supply to all our customers, and to ensure there are no adverse impacts from not operating a REFCL across the supply area, Powercor maintain the right to:

- Isolate any HVCs that are supplied from that substation, where the HVC is experiencing issues which jeopardises safe REFCL operation (i.e. failure of their isolation transformer); and
- Place the REFCL into service in the most sensitive operating mode available.

The decision to isolate a HVC will be made with due consideration of the impact to the customer and to the wider community.

Performance Caveats

Powercor will provide the highest level of bushfire protection possible, operating in Fire Risk mode for the duration of the Fire Danger Period in accordance with Table 9.

There are instances (including TFB and Catastrophic days) where the expected performance cannot be guaranteed and/or achieved due to one or more unexpected constraints. Such instances are:

- Network configuration outside the parameters of which Setting Group 1 was demonstrated.
- Any single phase switching of the following distribution assets will require the REFCL to be removed for service:
  - Greater than five kilometres of overhead line.
  - Any length of underground cable.
  - Any section containing a capacitive balancing system.
- Fire Risk Mode may be used in conjunction with Setting Groups 2 or 3 should network conditions constrain the application of Setting Group 1. Examples of such constraints are:
  - Network Configuration Abnormal due to contingencies.
  - Unacceptable of loss of Capacitive Balance.
- Performance at or near Setting Group 1 will not be available should any of the REFCL Backup Protection systems be required to activate due to an unforeseen contingent event.
- The REFCL will be taken out of service should REFCL performance become unpredictable and impact the performance, reliability, or safety of the network.

Backup Protection Functions – REFCL Networks

In modes where the Soft Fault Confirmation technique is preferred, the Classic Fault Confirmation technique will be requested in instances where the REFCL inverter is unavailable.

- Unavailability may be due to failure, internal disturbance or disconnection during the initial compensation process due to a second phase having been involved in the fault.

REFCL systems installed on Powercor's network will be supervised by an independent Neutral Overvoltage protection:

- The response of this protection will be to close the effective ground circuit breaker, bypass the REFCL and return to conventional earth fault protection.
- This shall occur if the REFCL has not correctly handled the fault or responded to the fault in an acceptable time.

This is applicable to all operating modes and is subject to change as our experience operating a REFCL network matures.

Exemptions (1)

Issued by ESV on 7 November 2018 in respect to nominated segments of polyphase electric lines which are exempt from the requirement to have required capacity:

- Regulation 7(1)(ha) of the Regulations
- Regulation 7(1)(hb) of the Regulations

Each exempt line segment connected to an isolating transformer will be addressed by either:

- Being covered or placed underground, or
- Configured to achieve required capacity, or
- Removed from service due to conversion of supply from HV to LV.

Each exempt line segment was addressed prior to 1st November 2019.

A list of REFCL isolating transformers and associated exempt segments of polyphase electric lines is listed in Appendix H, Table 19.

Exemptions (2)

Issued by ESV on 5 June 2020 in respect to Corio (CRO) and Geelong (GL) zone substations being exempt from the requirement to have required capacity:

- Regulation 7(1)(ha) of the Regulations.
- Regulation 7(1)(hb) of the Regulations.

Powercor established an alternate new complying substation (known as Gheringhap (GHP) zone substation) that supplies nominated 22kV polyphase electric lines originally emanating from CRO and GL.

Exemptions (3)

Published in the Government Gazette on 1 October 2020 (Order-in-Council), wholly underground and hybrid underground 22kV polyphase electric lines that are isolated via a 22kV isolating transformer are exempt from the requirement to have required capacity:

- Regulation 7(1)(ha) of the Regulations.
- Regulation 7(1)(hb) of the Regulations.

A list of REFCL isolating transformers and associated 22kV polyphase lines that are exempt are listed in Appendix H, Table 19.

ESV Operating REFCL Policy

On 6 December 2024, ESV released an *Operating Rapid Earth Fault Current Limiters (REFCLs) Policy* which outlines their minimum expectations about how distribution businesses should operate REFCLs installed on their networks in Victoria, unless an alternative approach is demonstrated to be more appropriate for their circumstances.

Powercor has commenced reviewing the requirements set out in ESV's policy and will further demonstrate our approach for operating REFCLs in the next revision of the BMP.

6.6 Electric Line Construction Areas

6.6.1 ELCA Overview

There are 15 ELCAs in Powercor's distribution area. The areas are in accordance with the regulations and are derived from plans lodged in the Central Plan Office of the Department of Energy, Environment and Climate Action (DEECA). These areas can be viewed on Powercor's Map Insights application by selecting "Bushfire Construction Areas" layer. The areas are displayed in purple, and all assets within these areas are visible to the user.

A screen capture from Powercor's Google Earth Enterprise application showing these areas is shown in Figure 5, including a close up of the Colac area.

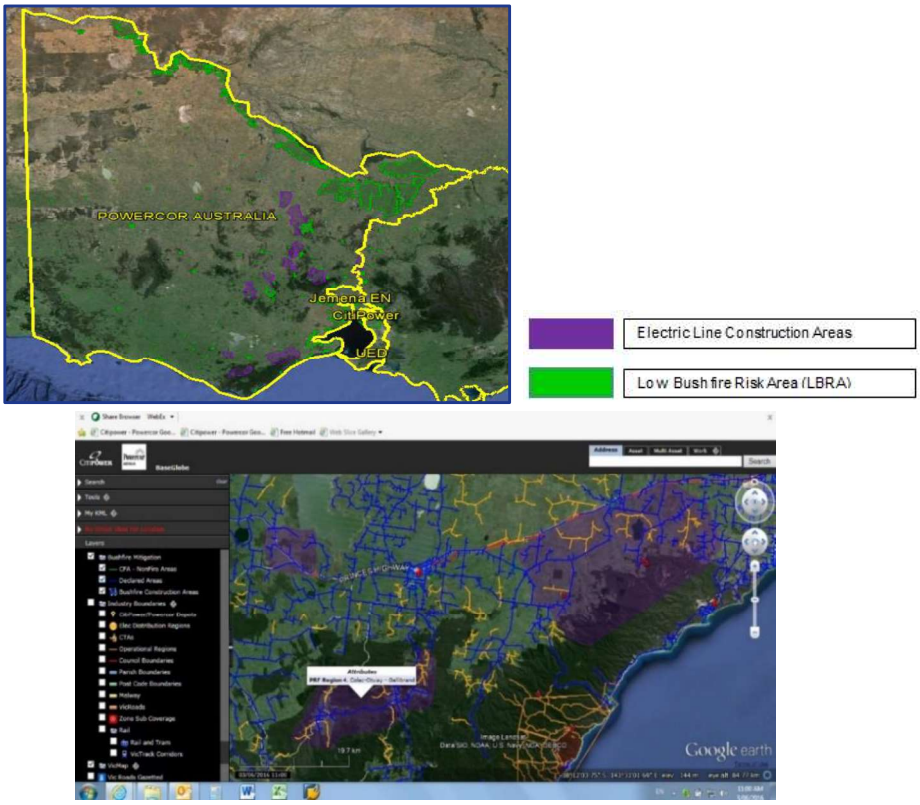

Figure 5: Electric Line Construction Areas

6.6.2 ELCA Construction Standards

As a preventative strategy to reduce the likelihood of powerline-initiated bushfires, the regulations define a higher standard for electric line works in ELCAs. In accordance with these regulations, any new Powercor works to be undertaken in ELCAs that meet the defined criteria will comply with the higher standards of construction. These standards will apply to construction of 22kV, SWER and LV assets and must utilise either:

- Aerial Bundled Cable (ABC).
- Underground cable.
- Covered conductor.

Powercor's current technical solutions to address the construction standards required in ELCAs are described below.

Aerial Bundled Cable

ABC consists of three insulated cables wound around a bare catenary wire. The catenary wire provides the tensile strength and support for stringing ABC between pole or tower supporting structures.

The standard design for associated line equipment includes insulated and covered leads for transformers, automatic circuit reclosers, surge arrestors, HV fuses and gas insulated switches.

The relevant Technical Standards are the ET-series (LVABC) and the EW-series (HVABC).

Hybrid Underground

Underground cable is used between pole type substation and HV tee pole above ground structures.

The above ground assets, similar to ABC, include insulated and covered leads for transformers, automatic circuit reclosers, surge arrestors, HV fuses and gas insulated switches.

Hybrid underground on SWER systems in ELCAs will standardize on the use of Fault Tamers in lieu of EDO fuses and "code red" protection settings will be applied to SWER ACRs on TFB days.

The relevant Technical Standards are the GH-series (Hybrid Underground).

Conventional Underground

Similar to hybrid underground with the exception that associated equipment such as substations, switches and fusing are contained within ground mounted, insulated enclosures.

Interfaces with an overhead network have insulated or covered leads to surge arrestors.

The relevant Technical Standards are the GA-series (General), GB-series (HV cables and accessories), GC-series (Conduit and Cable Pulling), GE-series (Cable Head Poles) and GL-series (Kiosks and Substations).

HV Covered Conductor

Two HV Covered Conductor (HVCC) solution options have been developed, specifically the:

- Amokabel open wire covered conductor system.
- Hendrix spacer conductor system.

The relevant Technical Standards are the EY-series (Amokabel) and the EX-series (Hendrix).

6.6.3 Application of Electric Line Construction Area

Powercor's higher design and construction standards in ELCAs are applied as per the following scenarios:

- all new construction ie: "greenfields":
  - new customer connections
  - new feeder or feeder extensions.
- all works involving re-conductoring on four or more consecutive spans:
  - re-conductoring, conductor replacement or line relocation project greater than or equal to 4 consecutive spans
  - includes any subsidiary HV circuits and/or dual circuits on the same poles or towers
  - includes any single span tee-off
  - excludes any multi-span spur lines that may tee-off from the spans being re-conductored
  - excludes maintenance works that affect the pole top structure on an individual pole basis
    - eg: a crossarm change, a substation replacement
  - excludes replacement or upgrades of assets on individual poles or towers
    - eg: a pole substation upgrade, a switch replacement

- excludes any fault repair works that inhibits timely restoration of supply to customers
- excludes 66kV works.

6.7 SWER ACRs

Powercor completed the installation of SWER ACRs as per the amended *Electricity Safety (Bushfire Mitigation) Regulations 2013 in November 2020*.

Powercor commits to ensuring any new or augmented (split) overhead SWER systems will be protected by a SWER ACR which has programable and remote reclose settings.

6.8 Low Voltage Overhead Electrical Cable/wire

Powercor constructs or replaces overhead low voltage lines with insulated electrical cable or wire in HBRA as detailed in the Technical Standard LV ABC Mains and Services (ET001) and the *Electricity Safety (Bushfire Mitigation) Regulations 2023*.

6.9 Vegetation Management

Powercor is responsible for the management of vegetation around power lines and other electricity assets in both the rural and urban areas of the network. In some urban locations there are "Declared Areas", where the Councils are managers of public land and are responsible for keeping trees clear of electric lines.

Powercor's vegetation activities are managed in accordance with the Electric Line Clearance (Vegetation) Management Plan.

Powercor's accepted Electric Line Clearance (Vegetation) Management Plan outlines management processes, programs and cycles for maintaining clearances between vegetation and network assets.

6.10 Private Electric Lines

Inspections

Powercor has an obligation under the *Electricity Safety Act 1998* to inspect Private Electric Lines (PELs) that are above the surface of land within its distribution area, other than any prescribed parts of those lines as defined in Regulation 9 of the *Electricity Safety (Bushfire Mitigation) Regulations 2023*. Point of Supply definitions are determined as per the *Electricity Safety Act 1998.* PELs are inspected to identify any defects, or infringing vegetation, which may affect the fire and/or electrical safety of the line.

Electricity Safety (Bushfire Mitigation) Regulations 2023

The *Electricity Safety (Bushfire Mitigation) Regulations* were amended in 2023, which included additional requirements associated with PELs:

- inspection of clearances
- hazard tree inspection by qualified arborists.

Inspections are undertaken to include the prescribed standards of inspection contained in section 11 of the *Electricity Safety (Bushfire Mitigation) Regulations 2023*. There are three variations to these prescribed standards of inspection being applied by Powercor.

Powercor meets the required outcomes of regulation 11(1)(j), 11(1)(k) and 11(1)(l) by the inspection techniques shown below.

1. The condition of hardwood PEL poles located in concrete is determined by drilling down at an angle to inspect the condition of the pole below concrete level to determine the millimetres of wood free of decay and the presence of termites.
2. The condition of treated pine PEL poles is determined by assessing the degree of external rot and also measurement of the pole girth. Powercor meets the required outcomes of regulation 11(1)(l) by the inspection technique shown in (3) below.
3. The condition of steel PEL poles located in concrete is determined by a visual inspection down to the point where the pole enters into the concrete to ensure that the pole retains 75% of steel thickness in the corroded area when compared against a non-corroded area on the pole.

Operational procedures for Powercor's PEL inspection program are contained within the following documents:

- Maintenance Procedure - Private Electric Lines (PR-5062.02)
- Asset Inspection Manual (CPPAL-MA-0450).

Powercor's asset inspectors attempt to liaise with PEL owners regarding PEL inspection requirements before commencing any work. If the PEL owner is not home or is not spoken to, the asset inspector is required to leave a

pamphlet informing PEL owners that an inspection of their PEL was undertaken, a summary of inspection findings and general information regarding PELs including the requirement for Powercor to inspect PELs as required under the *Electricity Safety Act 1998*. A copy of this pamphlet is contained in Appendix D.

The annual PEL mail out ensures that all Powercor customers who have a PEL will receive a letter and a brochure. The letter provides relevant information as well as our policy on defective PELs. The brochure covers topics including ownership, responsibilities, maintenance, vegetation clearance, electrical safety, disconnection, and a guide to PEL inspection. The mail out of these normally commences in early November.

Powercor notifies the owners of up-coming PEL inspections, as required in the *Electricity Safety (Bushfire Mitigation) Regulations 2023*. These letters notify the owner which part of the line we will be inspecting and what will happen if defects are found (Refer Appendix E). Notice is given not less than 21 days and not more than 45 days before inspection.

Disconnection

PELs that are identified as having a fire risk defect are disconnected on TFB days. Landowners, or occupiers, who are responsible for a defective PEL, are given up to 30 days to rectify vegetation infringements or other urgent defects. Every attempt is made to contact the customer by phone as soon as Powercor becomes aware of the defect during the declared fire danger period. If such defects are not corrected within this time the owner, or occupier, is given further written notice following which they are advised that the matter has been referred to the ESV as required, according to referral advice provided by ESV.

Powercor regularly contacts the responsible landowner, or occupier, by telephone to monitor the progress of corrective action. The requirements for reinspection of PELs referred to ESV for non-compliance are contained within the Identification, Recording and Rectification of Defective PELs (LV) Procedure (JEQA4UJ443MT-158-503).

Any hazardous PEL found during inspections are disconnected to ensure fire and/or electrical safety. Supply is not restored until the installation is safe to reconnect.

ESV has approved the disconnection of PELs with urgent fire defects on TFB days. When a disconnection is necessary, Powercor's Customer Compliance Group advises the customer and creates an entry in the Outage Management System (OMS) which prompts the System Control Centre to dispatch a crew to disconnect supply.

Operational procedures for the identification and rectification of defective LV PEL are contained within the Identification, Recording and Rectification of Defective PELs (LV) Procedure (JEQA4UJ443MT-158-503).

The specific actions for the management of PELs with outstanding urgent fire defects, on days of TFB, are contained in Powercor's Total Fire Ban Day Action Plan (PAL-PL-0009.1).

6.11 New Technologies

Powercor is committed to continuous improvement. This often involves trialling or developing new technologies, which if successful and meets AFAP requirements will be adopted as normal business practice. Powercor will keep ESV informed of inflight initiatives (listed below) and new initiatives on a quarterly basis.

6.11.1 Early Fault Detection

Powercor continues to evaluate the in-service performance of Early Fault Detection technology for application on HV lines in HBRAs.

6.11.2 Smart meter detection algorithms

Powercor continues to leverage AMI smart meter data to develop algorithms to reduce network safety risk. Powercor has developed and recently implemented an algorithm that assists detect deteriorating LV assets including Fused Overhead Line Connection Boxes (FOLCBs) and Fused Switched Disconnect (FSDs). The performance of the algorithm is currently being monitored and adjusted to achieve optimum sensitivity detection levels.

Powercor is also currently developing and trialling algorithms to identify potential HV fuse candling and overloaded distribution transformers.

6.11.3 SWER broken conductor detection

Powercor is developing technology with Victoria University to detect and isolate SWER broken conductors. Prototype technology has been developed and installed across three Powercor SWER systems to evaluate detection performance. Powercor is continuing to work with Victoria University to improve detection performance and explore commercialisation partners.

The undertaking of these projects and initiatives reaffirms Powercor's commitment to developing and maintaining its electricity supply network to reduce the bushfire risk across its distribution area.

6.12 Asset Replacement Programs

Powercor has identified proactive asset replacement programs to improve risk reduction in the highest fire risk areas of the network.

6.12.1 Replacement of EDO Fuses

EDO fuse failures have been identified as a contributor to fire starts within the Powercor network. To mitigate fires caused by EDO fuse failures, Powercor is proactively replacing all EDO fuses with fault tamers (where suitable) in ELCAs. Powercor is also progressively replacing EDO fuses with fault tamers (where suitable) in HBRAs other than ELCAs, on an opportunistic basis.

A product issue with the fault tamer was identified in September 2022 which resulted in a program pause. The root cause has since been addressed by the manufacturer with product supply resuming in mid-2024.

Powercor's replacement program recommenced in October 2024, and plans to replace the remaining 1,533 sites by 1 June 2027.

6.12.2 Replacement of HV wooden crossarms with steel crossarms

HV wood crossarms have been identified as a significant contributor to fire start risk within the Powercor network. A targeted proactive replacement program of HV wooden crossarms with steel crossarms in high bushfire consequence areas was informed by an AFAP assessment and subsequent analysis. In October 2022, the proactive replacement program, targeting all 600 HV wood crossarms in ELCAs commenced, with the initial 300 HV wood crossarms replaced with steel crossarms by the end of March 2024, ahead of schedule. The remaining 300 crossarms are planned to be completed by December 2026.

6.12.3 Sustainable wood pole management program

This section describes how Powercor complies with the ESV request pursuant to section 109(1) of the *Electricity Safety Act 1998* and its obligations and general duties as set out in s98 of the Act to revise its BMP. Powercor specifically commits to the volume of wood pole interventions (replacements and reinforcements) to achieve sustainable and safe outcomes, as far as practicable, for the Victorian community, particularly in HBRAs to reduce the risk of bushfire as detailed below.

This will be achieved by intervening on poles based on compliance (pole condition) as well as a targeted proactive risk driven program. Together, these asset management actions will result in addressing unsafe or ageing wood poles and will have the overall effect of reducing the average age of the wood pole population.

This commitment requires a minimum of 34,650 wood pole interventions between the period 1 January 2022 and 31 December 2026 including:

1. A minimum of 25,241 wood pole interventions in HBRAs and/or electric line construction areas (with a minimum of 13,614 of these interventions to be replacements); and
2. Replacement of not less than 3,519 reinforced poles.

The sustainable wood pole management program sets out the methodology, approach and policies being used by Powercor to identify and prioritise the committed minimum intervention volumes, and enable ESV to monitor delivery progress and compliance against the following intervention categories:

1. Compliance-driven: measured pole serviceability condition.
2. Compliance-driven: observed defects (visual above ground defects).
3. Risk-driven: applying a Risk-Based Asset Management (RBAM) methodology.

Compliance-Driven: Measured Condition Defects

Powercor's approach to determining compliance-driven measured condition defects associated with wood poles are described below in several key policies.

The Maintenance Procedure - Poles and Towers (PR-5062.01) details the management regime of non-routine maintenance identified following an asset inspection, specifically describing the type of inspection, time frames and the pole classification criteria in establishing the pole condition.

Powercor recently implemented the Enhanced Pole Calculator (EPC) incorporating the Serviceability Index (SI) assessment methodology in determining the measured pole condition, as documented in the Serviceability Assessment of Poles Standard (CPPAL-ST-5062.01). These changes were initiated and implemented as part of the Pole Management Improvement Program, with Powercor adopting this serviceability assessment approach to incorporate the pole loading and design standards as per the requirements of *AS/NZS 7000:2016 Overhead Line Design.*

The Serviceability Assessment of Poles Standard (CPPAL-ST-5062.01) details the serviceability thresholds to be used in the assessment of pole structures in determining compliance driven wood pole conditions and outlines the business rules related to the assessment of pole serviceability as it pertains to the ability to withstand pole tip loads on the structure.

This policy aligns historical and future design, inspection standards and current knowledge of the performance of pole materials.

Finally, the Maintenance Procedure - Poles and Towers (PR-5062.01), details how permanent reinforcement systems shall be managed to optimise asset performance. Specifically, for this program, it specifies the management of existing double-staked poles in HBRAs.

Compliance-Driven: Observed Condition Defects

The Maintenance Procedure - Poles and Towers (PR-5062.01) outlines the 'Compliance-driven: observed defects' which identifies through a visual above ground assessment, defects not attributable to the EPC serviceability condition assessment that cannot be maintained through a repair.

Observed condition defects considered in the maintenance procedure include:

- Poles damaged due to fire, vehicle impact, third party or lightning.
- A defect has been identified above 2 metres on the pole (splits, holes, knots) and is assessed as cannot be repaired.
- A pole has been identified with Dampwood termites or fungal fruiting bodies above 2 metres.

Poles assessed during cyclic and non-cyclic asset inspections that may pose a risk due to leaning as set out in the Maintenance Procedure - Poles and Towers (PR-5062.01) shall be reported and appropriately actioned as specified in the maintenance procedure.

Risk-Driven: Risk Based Asset Management

To achieve the minimum intervention volumes, Powercor will supplement the compliance-driven volumes with a proactive risk-driven approach.

The Risk Based Asset Management of Poles (CPPAL-GU-5062.01) guideline details the deployed risk-based asset management approach through a Condition Based Risk Model (CBRM) to determine prudent pole interventions, achieving a balance between risk, cost and performance.

Risk based interventions are determined and calibrated in conjunction with the CBRM process.

To identify the poles for intervention to meet the minimum required volumes, a criticality ranking has been determined to reflect the modelled consequences of a pole failure. This criticality, utilised within the RBAM system, has been established and is applied against every pole on the network within SAP. The combination of the pole condition and the RBAM criticality is used to generate a prioritised list of poles across the network, with this prioritisation used to determine risk-based interventions.

A nominal ranking approach informs the prioritised risk-based interventions as stated in the Table 10 matrix. Powercor plan to prioritise the committed pole intervention volumes using the hierarchy classification ranking (Highest to Lowest Risk). RBAM will provide the flexibility to proactively deliver the required interventions over and above what has been identified through our compliance-driven inspection defects to meet the minimum pole intervention volumes.

Table 10: Prioritised Risk-Based Intervention Matrix

Pole Criticality	1	2	3	4	5
Pole Condition/Target Fire Area	LBRA	LBRA	HBRA	HBRA[1]	ELCA
Unserviceable (P1, P2)					
AC Serviceable (P3)					
Serviceable (P4) ≥50 years & SWT <70mm					
Serviceable (P4) ≥50 years & SWT ≤75mm					
Serviceable (P5)					

Legend – Hierarchy Classification		
Compliance driven measured condition/observable defects	Rank 1	Highest Risk
	Rank 2	
Risk driven interventions	Rank 3	
	Rank 4	
Ongoing Monitoring and Inspection	Rank 5	Lowest Risk

Powercor's delivery approach will use the existing asset inspection program to manage and identify the wood pole interventions to be delivered in the 2022-2026 period.

Utilising our SAP Asset Management systems and procedures, notifications will be assigned and generated to each respective pole for replacement or reinforcement in accordance with our standard maintenance practices and priority policy. The Maintenance Defect Priority Standard (CPPAL-ST-5060.01) supported by the Risk Based Asset Management of Poles (CPPAL-GU-5062.01) guideline defines the appropriate maintenance response required to manage maintenance defects specifying the priority ratings and rectification time frames applicable for each priority rating.

These works will be managed accordingly within the Network Services delivery schedules to ensure the design, procurement and construction maintenance activities are undertaken in accordance with the prescribed priority timeframes.

Minimum Pole Intervention volumes

Across the Powercor network a minimum 34,650 wood pole intervention volumes are committed for delivery over the 1 January 2022 to 31 December 2026 period, to include a minimum of:

- 25,241 wood pole interventions in HBRA, with 13,614 of these to be replacements; and
- 3,519 reinforced wood pole replacements.

These minimum pole intervention volumes are split across the total network by replacements and reinforcements as outlined in Table 11 with an additional breakdown by intervention categories outlined in Table 12.

[1] The targeted volumes for wood pole condition P3 & P4 with criticality 4 in HBRA, exclude 66kV poles in LBRA (these are Rank 5 in hierarchy classification)

Table 11: Powercor Intervention Volumes for Period 2022 to 2026

Pole Intervention Volumes	Actual		Plan (years)			
	2022	2023	2024	2025	2026	Total
Replacements	4,051	4,737	3,673	4,153	4,153	20,767
Reinforcements	3,150	2,618	2,742	2,687	2,686	13,883
Totals	**7,201**	**7,355**	**6,415**	**6,840**	**6,839**	**34,650**

Table 12: Powercor Intervention Volumes by Categories for Period 2022 to 2026

Pole Intervention Categories (Volumes)	Actual		Plan (years)			
	2022	2023	2024	2025	2026	Total
Network Interventions	7,201	7,355	6,415	6,840	6,839	34,650
HBRA Interventions	5,457	5,381	4,632	5,016	5,014	25,500
HBRA Replacements	2,954	3,185	2,334	2,764	2,763	14,000
Network Reinforced Replacements	763	1,261	564	600	600	3,788
HBRA Reinforced Replacements	472	764	564	600	600	3,000

Powercor will deliver the minimum 5-year wood pole intervention volume as shown in the Total column in Table 11 and Table 12.

NOTE: Some categories in Table 12 are a subset of another category meaning the category totals do not collectively sum up to the totals described in Table 11.

For each year during this period, Powercor will commit to a minimum wood pole intervention volume no lower than 90% of the yearly values shown in Table 11 and Table 12, and any subsequent updates to these tables.

A tolerance each year allows for any typical variability due to condition-driven find rates, inspection volumes as well as weather and access constraints. Unexpected circumstances beyond Powercor's control may, however, arise resulting in further reducing the volume delivered in any one year. Should Powercor be unable to deliver the required volumes, ESV will be informed together with the associated impacts and recovery plans.

By the end of January each year a revised pole intervention plan will be resubmitted to ESV reflecting the recalculated remaining annual volumes to ensure the minimum 5-year committed volume will be met. The plan will be amended taking into account the actual delivered interventions in the preceding year(s) to ensure the total minimum committed volumes are met by the end of 2026.

6.13 Conductor Clearances (T-On and T-Off Structures)

Powercor has implemented an asset inspection-based program to identify, prioritise, and rectify conductor clearance defects to improve the management of conductor clearances.

This section should be read in-conjunction with section 6.1.4 which describes the implementation of Powercor's LiDAR conductor clearance inspection methodology to support the management of conductor clearances at the pole or in-span to ensure minimum clearance heights are maintained.

In assessing these risks, Powercor has considered the factors associated with designing, operating, constructing, and maintaining electricity networks in our differing environments, which potentially contribute to increasing the risk of fire ignition due to conductor clashing or flashover, to include:

- Changes in design and construction standards that have varied over the asset's life cycle.
- Incorrect inspection and maintenance practices for identifying conductor clearance breaches.
- Incorrect application of design and construction standards.
- Asset condition change or deterioration over time impacted by environmental conditions (weather, wind, ground subsidence etc).

Powercor is committed to reducing the risk of bushfire ignition arising from conductor clashing or flashover associated with vertical clearance for crossing at T-on and T-off structures, by implementing the following high-level summary of key controls:

- For new assets, application of its design and construction standards to the requirements of *AS/NZS 7000:2016 Overhead Line Design*, to mitigate the risk and potential consequence(s) of a conductor clearance breach leading to a clash or flashover, based on fire area.
- Application of the Maintenance Procedure - Conductors Aerial Line Clearances (PR-5064.02) to manage the identification, measurement, priority, and actions - setting out the reporting triggers and rectification time frames for clearances between conductors on the same or different circuits at all T-on and T-off structures.
- Removal of high voltage T-on structures as a standard structure and can only be adopted, where no alternative design solution is viable, following the completion of a safety in design risk assessment and approval of a non-standard design as set out in the procedure.
- Inspection and measurement of vertical clearance for high voltage and sub-transmission (attached) crossings at T-on and T-off structures.
- Any leaning poles identified through the cyclic inspection program that have a T-on structure on the same pole or at the other side of the span will have their lean measured and recorded, and the clearance between conductors will be measured by an asset inspector. Where a clearance breach is identified it will be recorded as a higher priority defect.

A priority rating of P1 is assigned to conductor clearance defects in HBRA with signs of clashing. Defects that represent a lower risk of bushfire ignition may be assigned a lower priority, consistent with the level of risk.

Powercor is committed to continuous improvement, as evidenced by the implementation and use of new technology to manage the risk associated with conductor clearance breaches, to complement our existing cyclic ground-based inspections by asset inspectors.

Powercor's governance and assurance processes for monitoring and ensuring the effectiveness of controls, specifically relating to training and reporting, monitoring, and auditing, are contained within sections 6.15, 7 and 10.

6.14 Resourcing

Powercor ensures appropriate resources are available to carry out the activities outlined in this plan.

A detailed asset inspection program, of the following years work, is developed and provided to our Asset Inspection Group to enable them to plan their resource requirements to meet the program's needs.

Powercor is responsible for the overall vegetation program management with sub-contractor/s engaged to complete inspection and cutting tasks.

6.15 Training

Powercor has an established and documented system to ensure that employees and contractors who are working on or near the electricity network are suitably competent and adequately trained to carry out their duties.

The key steps that Powercor has in place to manage competency and training requirements are illustrated in Figure 6.

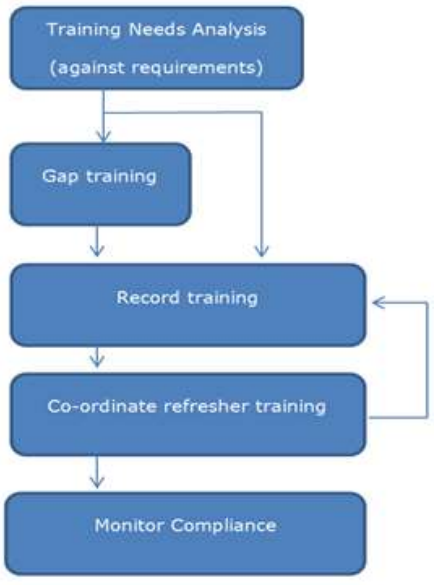

Figure 6: Competency and training process.

In Powercor, the Electricity Networks business unit sets the training standard for workers who are working on or near the electricity network. The training standards are established through the industry committee VESI Skills and Training Reference Committee for consistency within the State and nationally through Industry Reference Committees.

If training is required specifically for Powercor this is co-ordinated as Enterprise training for employees. For contractors, requirements for additional training would be included in a contract agreement.

Further detail can be found in the Technical Training Compliance Policy (JEQA4UJ443MT-173-25) and Technical Training Guideline (JEQA4UJ443MT-173-28).

All Asset Inspectors are required to meet the training requirements as specified in the *VESI Skills and Training Matrix.* These training requirements are confirmed by Powercor when an application request is made for an Asset Inspector to work on the network.

Where the qualification (being Cert II in ESI Asset Inspection UET20612 or subsequent version) has been attained in a State or Territory of Australia other than Victoria, induction to Powercor requirements (including our procedures) is conducted by a person holding a Certificate IV in Training and Assessment.

Powercor has developed enterprise specific competency standards for the activity of asset inspection. These standards provide contractors and training providers with the information necessary to develop appropriate training courses that will enable individuals to become approved to inspect Powercor assets.

Ongoing competency

Audit processes are in place to ensure that there is consistent application of knowledge and skill to the standard of performance required for asset inspectors.

Asset Inspector audit findings are rated and the cause of the finding identified. This may result in the need for refresher training or mentoring of the Asset Inspector to ensure the required competency is achieved.

Overall performance of the asset inspector is monitored whereby frequency rates of audits are determined based on their performance.

Powercor has implemented the Australian ESI Skills Passport in 2010. The Australian ESI Skills Passport system has enhanced the portability of the ESI workforce by mutual recognition of agreed training standards. Training is recorded in the passport and can be viewed to confirm currency of training for the task being undertaken. Further information can be located at www.esipassport.com.au.

The training programs for specific job roles in bushfire mitigation activities are described below.

Asset Inspection

As per ESV's *Training Approval Statement, Asset Inspectors*, asset inspectors working on the Powercor network are required to hold a Certificate II in Asset Inspection (Course Code: UET20612 or subsequent version).

The *VESI Skills and Training Matrix* stipulates the requirements and frequency of refresher training for Asset Inspectors. The matrix is available at www.vesi.com.au.

Vegetation Management

All training requirements for vegetation management are covered in the Electric Line Clearance (Vegetation) Management Plan.

Line Work

The *VESI Skills and Training Matrix* stipulates the qualifications and refresher training for a line worker. The employing company is required to organise training to the standards referred to in the matrix. The employing company will keep records of all training undertaken.

Line worker apprentices are engaged in bushfire mitigation activities from time to time. This provides experience in a broad range of tasks. When companies engage apprentices, they work under the *VESI Apprentice Supervision Guidelines* as published on the VESI website www.vesi.com.au.

Formal training of apprentices, in line work, is conducted by a Registered Training Organisation (RTO) and this training is supported "on the job" by designated mentors and tradespersons.

Technical Standards

Powercor's Plant and Standards group provide information to Powercor employees, Local Service Agents (LSAs) and contractors with regard to new initiatives in the design and construction of network assets, generally on a monthly basis. If a significant new item of equipment or a significant new technical standard is being introduced, then specially convened information sessions may be conducted.

All contractors or other external persons associated with works on Powercor assets can register with Powercor to gain "read only" access to Powercor's technical standards.

Information sessions are also stored in the "Source" document portal on Powercor's Intranet System for future viewing.

6.16 Liaison with Other Organisations

Powercor has a procedure for coordinating BFM activities and emergency procedures with relevant organisations which may include any of the following:

- ESV
- CFA
- Fire Rescue Victoria (FRV)
- State Emergency Service (SES)
- DEECA
- Department of State Development, Business & Innovation (DSDBI)
- Municipalities
- Mutual Aid Plan Planning Committee (MAPPC)
- Bureau of Meteorology (BOM)
- Other Distribution/Transmission Network Operators.

Actions to be undertaken in the event of a major event or emergency are contained in the Incident Management Procedure (JEQA4UJ443MT-185-28490) and Crisis Management Plan (JEQA4UJ443MT-154-386).

These documents include the responsibilities for communications with emergency services and other relevant organisations during events such as:

- Loss of the System Control Centre
- Major supply outages
- Major plant faults
- Lack of supply capacity (load shedding)
- Fires and incidents.

6.17 Public Awareness

In an effort to maintain community awareness of bushfire hazards, Powercor provides information to the public concerning various BFM activities. Powercor is committed to enhancing public awareness of:

- the potential risks associated with PELs
- the risks of planting inappropriate vegetation near electrical lines
- vegetation species suitable for planting near powerlines
- inspection timeframes
- other fire related matters.

As part of its Vegetation Management and PEL inspection programs, Powercor makes the following information available to its customers, via the Powercor website:

- Planting Trees Near Power Lines
- PELs - Understanding Your Responsibilities.

Powercor prepares an annual BFM communications plan with a high-level objective of being recognised as an organisation which values genuine engagement with its key stakeholders and local communities.

The communications plan may be outworked using various forms and channels including social media posts, traditional media releases, newspaper articles & advertisements, radio advertisements & interviews, TV interviews and face to face meetings with various stakeholders.

Powercor releases communications to Registered Electrical Contractors (RECs) through 'Tech Talk' newsletters within our service territory, in an effort to raise awareness and appreciation of the importance of key topics including, PEL maintenance works and complying with the regulations and Powercor's processes.

For details of communication with PEL owners refer to Section 6.10.

6.18 Assistance Provided to Fire Agencies

There are two rural fire fighting services, operating within Powercor's service area:

- DEECA – who are responsible for state forests and parks.
- Fire Rescue Victoria (FRV) / CFA – who are responsible for all other rural areas and is resourced largely by volunteers.

Powercor will provide assistance and work with the relevant fire control agency in the investigation of fires near our supply network.

Powercor's Emergency Management Liaison Officers (EMLOs) are available to attend fire agency command centres and provide information or assistance with issues relating to our distribution assets. An EMLO is a person that acts as a go-between or the link between two organisations to communicate and coordinate their activities.

Emergencies

Any requests for resources to assist fire agencies are coordinated by the Network Controller, from Powercor's System Control Centre.

Fire emergencies are communicated directly to the System Control Centre via a direct phone number for emergency services organisations. Fault Crews are then promptly dispatched according to the information received.

Powercor will work with the relevant fire control agency to provide safe access to a fire or accident scene involving Powercor assets. This may include de-energisation of electrical assets upon request.

Further detail of actions to be undertaken in the event of a major event or emergency are contained in the Incident Management Procedure (JEQA4UJ443MT-185-28490) and Crisis Management Plan (JEQA4UJ443MT-154-386).

Powercor also has representation on the State Control Centre (SCC) electricity industry roster for EMLOs. An EMLO will provide the technical or subject matter expertise relating to the electricity industry and embeds an EMLO into the SCC to provide face-to-face coordination.

Information Exchange

There are a number of different forums for information exchange that take place between the fire agencies and Powercor.

A Regional Integrated Fire Management Planning Committee operates in each Region. Each committee includes representatives from the FRV, local fire brigades, DEECA, and local municipalities. A Powercor representative may either attend committee meetings or provide written reports on the status of Powercor's Bushfire Mitigation Program.

Each year prior to the fire danger period, the FRV is requested by ESV to hold an information day to provide a briefing and forecast for the coming season. Information presented includes the likely severity of the season and identification of high-risk areas. This information day is attended by Victorian electricity distributors (including Powercor), transmission operators and representatives from the ESV.

Information relating to the Fire Season declaration dates is provided to Powercor by FRV both through the receipt of Fire Season Declaration notices and also through discussions with FRV Regional Community Safety Managers.

6.19 Total Fire Ban Days

Powercor has a Total Fire Ban Day Action Plan (PAL-PL-0009.1) which is invoked on TFB days. The plan contains BFM strategies to be employed on days of extreme fire weather conditions to minimise the risk of a fire ignition being caused by Powercor's electricity network and is implemented under the direction of the Control Manager with assistance from the TFB Day Coordinator.

PELs which are located in hazardous bushfire risk areas and have defects which are not fire safe are disconnected on days of TFB. These lines are not reconnected until the end of the TFB or until the fire danger has subsided.

For works involving welding, cutting, grinding, or use of naked flame, permits from the appropriate organisation (eg. CFA, MFB, and DEECA) are used and adhered to.

Enhanced Protection and Suppression Settings on Total Fire Ban days

Enhanced TFB day protection settings are applied to nominated protection devices with remote capability being feeder circuit breakers, 3 phase ACRs and SWER ACRs / Fuse Savers to reduce the fault energy in the event of a fault.

The enhanced TFB day protection settings are applied in consideration with the following criteria:

- Devices located within 80% Highest Consequence (HC) using the Tolhurst model 2015/16 Ash Wednesday FDI140 with no previous burn history consequence scenario
- Devices that are within ELCAs
- Devices that are within REFCL areas

- Devices that are within HBRA.

Enhanced TFB day protection settings are applied to all SWER ACRs / Fuse Savers with remote capability, regardless of the location.

If unforeseen circumstances, such as communication failure, prevent devices being remotely set to their required modes, the following controls will be deployed in consideration with network events on the day:

- Setting the upstream device to an enhanced setting; or
- manual suppression of impacted devices, which will be undertaken in a prioritised manner.

The application of enhanced settings is undertaken in accordance with the Operational Guideline for Controllers on Days of Total Fire Ban / Catastrophic (JEQA4UJ443MT-149-706).

6.20 Declared Fire Danger Period

During the Declared Fire Danger Period, Powercor will continue with normal operation of its electrical assets. The majority of Powercor's operational and maintenance activities are configured to be undertaken for the full 12 months of the year, irrespective of the Declared Fire Danger Period.

There are however some activities that are specific to the Declared Fire Danger period. These include:

1. Vehicle Movement Off-road (see Appendix C).
2. Use of spark arresters on non-vehicular heat engines equipment such as hoggers, chainsaws and generators (see Appendix C).
3. Fire Fighting Equipment to be carried (see Appendix C).
4. Line Condition Observation Program – This is a series of field observations undertaken across the distribution network (see Section 6.1.4).
5. Enhanced BFM Activities – This is a program of additional activities that may be undertaken each fire season. A decision is made by Senior Management based on information received from various sources, including the CFA and other emergency services. Activities that are considered include:
   - Additional Thermographic inspections emanating from selected zone substations in high-risk areas identified by CFA.
   - Focusing some of the existing audit/observation programs in these high-risk areas identified by CFA.
   - Additional auditing/observation programs covering both asset condition monitoring and vegetation management in high-risk areas identified by CFA.

6.21 Fire Management

In the event of a fire, Powercor's operational and maintenance activities include:

- Receiving notification from or supplying notification to the relevant fire control agency regarding a fire event.
- Liaison with the relevant fire control agency regarding appropriate actions as required.
- Dispatching field crews for fault rectification or as directed/requested by the relevant fire control agency.
- Deployment of EMLOs if required to any Incident Control Centre established by the relevant fire control authority.
- Managing the fire event as set out in the Incident Management Procedure (JEQA4UJ443MT-185-28490) and Crisis Management Plan (JEQA4UJ443MT-154-386).

7. Program Timing

Powercor has produced a set of combined BFM program milestones which specify the completion dates required for key BFM activities. A copy of the BFM program milestones document is attached in Appendix B.

The asset inspection program dates are determined by the maintenance plan, in accordance with the relevant asset policy and are generated from SAP.

Remedial maintenance and asset replacement/modification is completed in accordance with the priority classification referred to in Section 6.2 and the Maintenance Defect Priority Standard (CPPAL-ST-5060.01).

Timing of vegetation management activities are undertaken in accordance with Powercor's Electric Line Clearance (Vegetation) Management Plan.

8. Fire Investigation

Any fire starts initiated by Powercor assets according to ESV reporting guidelines are reported to ESV. The System Control Centre identifies any fire starts from outage information or from external advice and notifies the Network Availability Officer (NAO) who investigates each situation according to the information provided. The NAO then sends completed reports to the Network Risk & Assurance team for checking and collation and forwarding to ESV as per the ESV reporting guidelines.

At the annual BFM post season review, ground fire start statistics are presented and discussed.

Operational procedures for the reporting of fire starts are contained within:

- Incident Management Procedure (JEQA4UJ443MT-185-28490)
- Update ESV and AER Reportable Incidents in Cintellate Procedure (JEQA4UJ443MT-173-45).

The operational procedures for the reporting of fires contained within the Incident Management Procedure (JEQA4UJ443MT-185-28490) are in accordance with the requirements stipulated in ESV's *Incident and Safety Performance Reporting Guidelines - Major electricity companies* located on the ESV website:

https://www.esv.vic.gov.au/sites/default/files/2022-12/Electrical-Safety-Performance-Reporting-Guidelines-Rev-05072022.pdf.

The procedure ensures that Powercor meets its responsibilities to employees, customers, members of the public and regulatory requirements.

9. Key Measures

9.1 Asset Maintenance and Vegetation Performance Measures

Asset Maintenance Performance

The Asset Maintenance Compliance Measure (AMCM) is a measure of line inspection and maintenance compliance.

The AMCM measures the completion performance of inspection and maintenance activities against policy targets.

An explanation of how the AMCM is calculated is provided in Appendix F.

The objective is to reduce the AMCM to zero by the start of the Fire Danger Period and to maintain zero throughout the period.

Vegetation Performance

Vegetation compliance is measured as a discrete count of HBRA Vegetation Priorities (VPs) outstanding, as reported to ESV.

9.2 Fire Starts

Reporting of ground and pole fires is undertaken as they occur and reported to ESV. Reporting procedures are contained within the following documents:

- Incident Management Procedure (JEQA4UJ443MT-185-28490)
- Update ESV and AER Reportable Incidents in Cintellate Procedure (JEQA4UJ443MT-173-45).

9.3 Asset Failures

As part of continuous improvement towards the mitigation of bushfires, Powercor records the causes of fire ignition which are attributed to failures of electricity assets. Analysis of asset failures and failure trends are carried out in order to develop improvements to maintenance policies, technical standards, work practices and enhanced preventative actions which all contribute to risk management strategies. Investigation of failed assets is the responsibility of the Asset Investigation section.

The Asset Failure Investigation and Reporting Procedure (18-06-P0001) details the reporting, analysis, and investigation of failed assets.

9.4 BFM Milestones

Powercor have produced a set of BFM program milestones which specify the completion dates required for key Electricity Networks BFM activities. These BFM activities are:

- Submit the Vegetation Management Plan (if required) to ESV.

- Conduct an annual BFM post season review.
- Submit the Bushfire Mitigation Plan (if required) to ESV.
- Submit the section 120P of the Electricity Safety Act annual compliance report to ESV.
- Complete the annual internal compliance audit of the Bushfire Mitigation Plan.
- Complete the PEL mail out to Powercor customers.
- Conduct the annual summer pre-season briefing to Senior Management.
- Submit an annual summer readiness report to IPART (NSW).
- Complete the Line Condition Observation program.

The achievement of these milestones is closely monitored and a copy of the BFM Program Milestones is attached in Appendix B.

10. Reporting, Monitoring and Auditing

10.1 Report and Monitoring

The Bushfire Mitigation Committee provides management and governance of the bushfire mitigation processes and fire season readiness activities.

Reporting processes are established which ensures that all levels of the BFM management structure, including executive management levels and ESV, are informed of the status of the company's preparedness and fire performance.

The reporting process incorporates requirements for:

- Prior to the Declared Fire Danger period
- During the fire danger season
- On Total Fire Ban days

Reporting and monitoring arrangements for TFB days are contained in the Total Fire Ban Day Action Plan (PAL-PL-0009.1).

BFM Status Report

The main method of monitoring the BFM plan is the BFM Status report, which includes the AMCM and outstanding HBRA vegetation. This report measures the status of a range of BFM activities against policy or program targets. Reported activities include asset inspection (including PELs), priority maintenance and vegetation outside policy clearance programs.

It is provided to senior management and employees involved in BFM activities and ESV. The report is also loaded onto Powercor's Intranet site for viewing by all Powercor personnel.

The BFM Status report is compiled and reported on a monthly basis, outside the Declared Fire Danger Period and then reverts to weekly reporting during the Declared Fire Danger Period. The frequency of this reporting enables close monitoring by both Powercor management and ESV.

The frequency of this reporting is sufficient to enable the detection and rectification of any situation that could jeopardise the achievement of a state of full preparedness by the start of the Declared Fire Danger Period.

Asset Maintenance Compliance Measure

Powercor's strategy to reduce the AMCM is to closely monitor the key programs associated with the BFM program. This includes maintenance and asset inspection items.

Asset Inspection

The Asset Inspection program is monitored by the Asset Inspection Group.

An automated daily exception report is generated from SAP and distributed by e-mail to relevant employees who monitor the asset inspection program. The Asset Inspection Group investigates any overdue poles, towers and associated assets to ensure appropriate action has been taken (including PEL poles).

Maintenance

An automated daily Priority 1 report is generated from OMS and distributed to relevant employees by e-mail. The Operational Faults Manager checks any outstanding items to ensure prompt action.

An automated daily Priority 2 exception report is generated from SAP and distributed by e-mail to alert relevant employees of defects that are overdue for rectification or close to becoming overdue. Operational procedures for the Maintenance Program Group to investigate outstanding defects and follow up actions are contained within the Maintenance Risk Assessment Procedure (SRCE 44719848-38419).

Vegetation Clearance

Powercor produce a weekly report which is distributed to key stakeholders. This report provides program status updates on all vegetation management programs. Status reporting on vegetation outside policy is included into the BFM Status report.

ESV

Powercor's reporting schedule to ESV, on its BFM activities, is listed below:

- Annual Vegetation Management Plan (supplied every 5 years, minimum).
- Bushfire Mitigation Plan (supplied every 5 years, minimum).
- BFM Status Report (reported monthly or weekly during the Declared Fire Danger period).
- AMCM, Vegetation Compliance and REFCL operational data (reported monthly or weekly during the Declared Fire Danger period).
- Ground and pole fire starts (reported as they occur).
- Fire Start Statistics (reported to ESV as per the ESV reporting requirements).
- Safety Program Report (Quarterly).
- Annual compliance report (regarding the requirements of s120P of the Electricity Safety Act) on or before the 1st of August each year to meet the requirements of the *Electricity Safety Amendment (Bushfire Mitigation Civil Penalties Scheme) Act 2017*.
- REFCL Performance Report (supplied annually).
- Sustainable Wood Pole Management Program actual volumes against the forecast plan on a quarterly basis and annual basis to demonstrate compliance with the BMP.

Reporting on issues found through ESV audit processes is carried out on request.

10.2 Auditing

Powercor's Audit and Inspection Programme Requirements Policy (JEQA4UJ443MT-175-29) provides information for the preparation of audit and inspection programmes.

Considering the range of audit and inspection programmes conducted across the organisation, each programme is required to determine the:

- scope of review or focus area
- classification of review activity as Audit or Inspection
- training/competency/qualification requirements of the auditors/inspectors executing
- frequency of review activities
- method of selecting or prioritising the items/aspects to review.

Powercor also has a program of system audits to validate the effectiveness of BFM processes, policies and systems used to manage or monitor BFM activities, these include:

- Internal audits of the BFM management programs and processes which are carried out by Audit Services. These audits are conducted to an internal audit schedule, which can be viewed on Powercor's Intranet site and are typically carried out between May and August each year.
- An annual ESV audit which is conducted in the lead up to the fire danger period and concentrates on adherence to the BFM plan and the processes and procedures that support the plan.

Audit improvement recommendations are documented and followed up for completion.

Other audits undertaken are described below.

Asset Inspection Audits

Powercor's Asset Inspection Group have self-audit programs that they manage and maintain. Any findings require a follow up audit of all inspectors where sub-standard work is identified. An intensified audit program is then established for that inspector until the attainment of satisfactory results.

Additionally, an independent third-party service provider is engaged to audit the performance of the asset inspectors.

Powercor's Asset Inspection Group monitor the results of their completed audits (including PEL inspections) and corrective actions proposed/undertaken as part their monthly asset inspection reporting.

Operational procedures relating to these audits are contained within the Audit and Inspection Programme Requirements Policy (JEQA4UJ443MT-175-29), the Asset Inspection Audits (Internal) procedure (SRCE-447194848-38356), and the External Audit of Asset Inspectors procedure (SRCE-447194848-38495).

Monitoring and auditing of the effectiveness of inspections and the competence of persons assigned to carry out inspections under the plan shall be done by monitoring and auditing the adherence to works practices which demonstrate skills and knowledge in Asset Inspection.

Maintenance Audits

Maintenance project field audits are undertaken by the Network Services Field Audit and Quality Group, who have an audit program that includes random audits of completed projects, to ensure that the relevant technical standards and design specifications have been achieved in the finished project. Any additional audits are completed upon request.

This program results in a number of maintenance projects being audited each year.

Network Services have a structured audit program that audits key maintenance works and involves Program Managers, Construction Project Leaders and Maintenance Officers.

Vegetation Audits

Powercor's Vegetation Quality & Engagement Team audit the activities and effectiveness of our vegetation management contractor in accordance with a documented audit schedule.

The vegetation management contractor also has their own internal audit program which addresses two key issues:

- Accuracy of vegetation identification and classification.
- Vegetation trimming/removal to the requirements of the code.

11. Reviewing

The Powercor BMP is frequently reviewed and amended as required. There are various means by which feedback is obtained and potential improvements are identified including:

- Changes in Regulation.
- Post Fire Season Review – this review meeting is held at the end of the fire danger period to review performance under the plan. Attendees include Powercor senior managers, corporate risk personnel, internal auditors, and key personnel involved in the BFM program. Presentations are delivered on the business's performance in each of the key BFM activities. Improvement opportunities are discussed and included into the BMP if required.
- Summer Pre-Season Briefing – this briefing is held before the start of the fire declaration period. It provides an opportunity to report on the progress of BMP activities and to plan contingencies, if the need arises, to meet the requirements of the plan.
- Internal and external audit findings.
- Technology changes.

12. Referenced Documents

Table 13: Internal References

Title	Document No.
Asset Failure Investigation and Reporting Procedure	18-06-P0001
Asset Inspection Audits (Internal) Procedure	SRCE-447194848-38356
Asset Inspection Manual	CPPAL-MA-0450
Asset Inspection Procedure	18–20–P0002
Audit and Inspection Programme Requirements Policy	JEQA4UJ443MT-175-29
Bushfire Mitigation Policy	PO-0003
Capacity Test Locations	CP_PAL_REFCL_104

Title	Document No.
Consideration of GFN Settings	CP_PAL_REFCL_303
Consideration of Influencing Factors	CP_PAL_REFCL_106
Crisis Management Plan	JEQA4UJ443MT-154-386
Demonstration of Required Capacity	CP_PAL_REFCL_103
Developing, Updating or Retiring an Asset Management Plan	PR-0009
Distribution Earthing Systems Policy	05-C0001.D290
Distribution Surge Arresters Policy	D–540
Electric Line Clearance (Vegetation) Management Plan	CPPAL & UE 2021-2026 ELCMP V2.3
Electricity Safety Management Scheme	JEQA4UJ443MT-173-116
ET-series (LVABC) Technical Standards	
EW-series (HVABVC) Technical Standards	
EX-series (Hendrix) Technical Standards	
External Audit of Asset Inspectors procedure	SRCE-447194848-38495
EY-series (Amokabel) Technical Standards	
Facilities for REFCL Performance Testing	CP_PAL_REFCL_105
GA-series (General) Technical Standards	
GB-series (HV cables and accessories) Technical Standards	
GC-series (Conduit and Cable Pulling) Technical Standards	
GE-series (Cable Head Poles) Technical Standards	
GH-series (Hybrid Underground) Technical Standards	
GL-series (Kiosks and Substations) Technical Standards	
High Voltage Fuses Policy	D–320
Identification, Recording and Rectification of Defective PELs (LV)	JEQA4UJ443MT-158-503
Inaccessible Asset Procedure	18–20–P0004
Incident Management Procedure	JEQA4UJ443MT-185-28490
Line Condition Observation Procedure	PAL-PR-0002
LV ABC Mains and Services	ET001
Maintenance Defect Priority Standard	CPPAL-ST-5060.01
Maintenance Procedure – Conductors Aerial Line Clearances	PR-5064.02
Maintenance Procedure – Conductors and Connectors	PR-5064.01
Maintenance Procedure – Distribution Thermographic Inspection	CPPAL-PR-5060.01
Maintenance Procedure - Distribution Transformers	CPPAL-PR-5071.01
Maintenance Procedure - Private Electric Lines	PR-5062.02
Maintenance Procedure - Poles and Towers	PR-5062.01
Maintenance Procedure - Pole Top Assembly	PR-5063.01
Maintenance Risk Assessment Procedure	SRCE 44719848-38419
Manage Fault Follow-Up and Repair Guideline	JEQA4UJ443MT-149-115
Manage Network Faults Procedure	JEQA4UJ443MT-149-83

Title	Document No.
Minimising Fire Start Risk on Total Fire Ban Days	PR-0016
Operational Guideline for Controllers on Days of Total Fire Ban / Catastrophic	JEQA4UJ443MT-149-706
Planting Trees Near Power Lines	
PELs - Understanding Your Responsibilities	
Policy for Annual Capacity Testing	CP_PAL_REFCL_102
Policy for Initial Capacity Testing	CP_PAL_REFCL_101
Resolution of Conditional Acceptance	CP_PAL_REFCL_302
Risk Based Asset Management of Poles Guideline	CPPAL-GU-5062.01
Serviceability Assessment of Poles Standard	CPPAL-ST-5062.01
Technical Training Compliance Policy	JEQA4UJ443MT-173-25
Technical Training Guideline	JEQA4UJ443MT-173-28
Total Fire Ban Day Action Plan	PAL-PL-0009.1
Update ESV and AER Reportable Incidents in Cintellate Procedure	JEQA4UJ443MT-173-45

Table 14: External References

Title	Document No.
Country Fire Authority Act 1958	
Country Fire Authority Regulations	
Electricity Safety Act 1998	
Electricity Safety Amendment (Bushfire Mitigation Civil Penalties Scheme) Act 2017	
Electricity Safety (Bushfire Mitigation) Amendment Regulations 2016	
Electricity Safety (Bushfire Mitigation) Regulations 2013 (amended 2020)	
Electricity Safety (Bushfire Mitigation) Regulations 2023	
Electricity Safety (Bushfire Mitigation) Regulations 2023 Regulatory Impact Statement	
Electricity Safety (Electric Line Clearance) Regulations 2020	
ESV Incident and Safety Performance Reporting Guidelines - Major electricity companies	
ESV Policy – Operating Rapid Earth Fault Current Limiters (REFCLs)	
Knapsack Spray Pumps	AS 1687 - 1991
Overhead Line Design	AS/NZS 7000 - 2016
Portable Fire Extinguishers	AS 1841.2 - 1997
Review of Voltage Standards for Bushfire Mitigation 2018	
Training Approval Statement, Asset Inspectors	
VESI Apprentice Supervision Guidelines	
VESI Skills and Training Matrix	

13. Definitions

Table 15: Terms and Definitions

Term	Definition
Fire Danger Period	A period declared under section 4 of the Country Fire Authority Act 1958 to be a fire danger period
Private Electric Line	Any low voltage line used to take electricity from the point of supply, whether or not that line is vested in the electricity supplier
Powercor	Powercor Australia Ltd
Total Fire Ban Day	A day that has been declared to be a day of total fire ban under section 40(1) of the Country Fire Authority Act 1958

Table 16: Acronyms, and abbreviations

Acronyms, abbreviations	Definition
ABC	Aerial Bundled Conductor
ACR	Automatic Circuit Recloser
ACT	Annual Capacity Test
AER	Australian Energy Regulator
AFAP	As Far As Practicable
AMCM	Asset Maintenance Compliance Measure
AMI	Advanced Metering Infrastructure
AMP	Asset Management Plan
ARVD	Armour Rod / Vibration Dampers
AS	Australian Standard
BAN	Ballarat North
BFM	Bushfire Mitigation
BMP	Bushfire Mitigation Plan
BOM	Bureau of Meteorology
CBRM	Condition Based Risk Model
CFA	Country Fire Authority
CLC	Colac
CMN	Castlemaine
CRO	Corio
CP	CitiPower
CPPAL	CitiPower / Powercor
CT	Capacity Test
DAPR	Distribution Annual Planning Report
DB	Distribution Business
DEECA	Department of Energy, Environment and Climate Action
DSDBI	Department of State Development, Business & Innovation
DSM	Distribution System Management

Acronyms, abbreviations	Definition
EDO	Expulsion Drop Out
EHK	Eaglehawk
ELCA	Electric Line Clearance Area
EMLO	Emergency Management Liaison Officer
EPC	Enhanced Pole Calculator
ESC	Essential Services Commission
ESMS	Electricity Safety Management Scheme
ESV	Energy Safe Victoria
FOLCB	Fused Overhead Line Connection Box
FRV	Fire Rescue Victoria
FSD	Fused Switch Disconnect
GFN	Ground Fault Neutraliser
GHP	Gheringhap
GIS	Geographical Information System
GL	Geelong
HBRA	Hazardous Bushfire Risk Area
HV	High Voltage
HVC	High Voltage Customers
HVCC	High Voltage Covered Conductor
ICT	Initial Capacity Test
IS	In-service
LBRA	Low Bushfire Risk Area
LiDAR	Light Detection and Ranging
LSA	Local Service Agent
LVABC	Low Voltage Aerial Bundled Cable
MAPPC	Mutual Aid Plan Planning Committee
NAO	Network Availability Officer
NS	No-service
OMS	Outage Management System
PAL	Powercor
P1	Priority 1
P2	Priority 2
P3	Priority 3
PEL	Private Electric Line (previously POEL – Private Overhead Electric Line)
PINS	Pole Inspection Orders
PN	Priority Notification for Information
POPP	Priority Opportunistic
RBAM	Risk Based Asset Management

Acronyms, abbreviations	Definition
REC	Registered Electrical Contractor
REFCL	Rapid Earth Fault Current Limiter
RESI	Resistograph
RCM	Reliability Centred Maintenance
RTO	Registered Training Organisation
SCC	State Control Centre
SDD	Sound, Dig, Drill
SEFM	Station Earth Fault Management
SES	State Emergency Service
SI	Serviceability Index
SWER	Single Wire Earth Return
SWT	Sound Wood Thickness
TFB	Total Fire Ban
TQY	Torquay
VESI	Victorian Electricity Supply Industry
VMS	Vegetation Management System
VP	Vegetation Priority
WIN	Winchelsea
WND	Woodend
WPD	Waurn Ponds

Appendix A: Total Fire Ban Day Action Plan

Refer separate document Total Fire Ban Day Action Plan (PAL-PL-0009.1).

Appendix B: BFM Program Milestones

Table 17: BFM Program Milestones

Item No.	BFM Milestone Description	Activity	Responsible Officer/Business Stream	Target Date
1	Submit Electric Line Clearance (Vegetation) Management Plans to ESV.	Management Plan submission is a regulatory requirement.	Vegetation Manager	As required
2	Conduct the annual BFM Post Season Review.	Review previous fire season.	Head of Network Risk and Performance	31 May
3	Submit s120P annual compliance report to ESV.	Prepare and submit the annual compliance report.	Network Risk and Assurance Manager	31 July
4	Conduct annual internal audit of the BFM Plan.	Identify areas for auditing and undertake audit	Head of Audit Services	30 September
5	Submit BFM Plan to ESV.	BFM Strategy plan submission is a regulatory requirement.	Network Risk and Assurance Manager	As required
6	Submit summer readiness report to IPART (NSW)	Prepare Asset Maintenance Compliance Measures and Vegetation Compliance readiness indicators for IPART	Network Risk and Assurance Manager	31 October
7	Complete mail out to Powercor PEL customers.	Letters will raise awareness / importance of PEL maintenance works with PEL owners.	Network Risk and Assurance Manager	30 November
8	Conduct the annual BFM Pre Season Review.	Review the upcoming fire season preparedness	Head of Network Risk and Performance	30 November
9	Complete Line Condition Observation program.	Ensure program of observations are completed.	Network Risk and Assurance Manager	31 December

Appendix C: Vehicle Fire Equipment & Vehicle Movement

C.1 Vehicle Fire Equipment & Vehicle Movement

Declared Fire Danger Period & Total Fire Ban (TFB) Days

This applies for all Powercor personnel including contractors and sub-contractors when travelling off-road. All drivers are to be advised that vehicles with hot exhausts entering grassed areas can initiate fires.

Definition of Off-road

"Vehicle travelling off a formed roadway or a paved or gravel surface".

During "Declared Fire Danger Periods" - for all travel on non-formed roadways or surfaces other than paved or gravel surfaces, a risk assessment must be undertaken.

The following checks should be included:

- Vehicle Clearance – Check that grass and other combustible material will not come in prolonged contact with the vehicle exhaust system whilst accessing/leaving the work site.
- Vehicles should be checked to ensure they are fitted with an efficient exhaust silencing device.
- Vehicles should be checked to ensure no grass or other combustible material is trapped on or near the exhaust system, both before going off-road and before leaving the work site.
- Vehicles must carry the prescribed fire suppression equipment prescribed in the *Country Fire Authority Regulations* i.e. At least one knapsack spray pump or stored pressure fire extinguisher of at least 9 litres capacity. (See below for more details).
- Check the worksite before leaving, looking for any signs of possible ignition.

Other Items for Consideration:

- During "Declared Fire Danger Periods", off–road activities should be limited as much as possible.
- Vehicles with greater ground clearance i.e. 4 wheel drive vehicles, are preferred to be used when travelling off-road.
- Drivers are to use already formed roads/tracks where possible, to access the work site, to limit contact with combustible material (If risk assessed as safe to do so).
- At the work site, park vehicles in areas where there is the least amount of combustible fuel.

C.2 Total Fire Ban Days (TFB)

On Total Fire Ban (TFB) days - off-road activity should be restricted to emergency/fault situations and other works necessary to maintain the network, which is risk assessed as safe to undertake.

Requirements applicable to the following items are described in procedure Minimising Fire Start Risk on Total Fire Ban Days (PR-0016):

- Fire Fighting Equipment; and
- Non-Vehicular Heat Engines (Examples: Generators, Hoggers, Chainsaws etc.)

Appendix D: Inspecting Powerlines on your Property Brochure

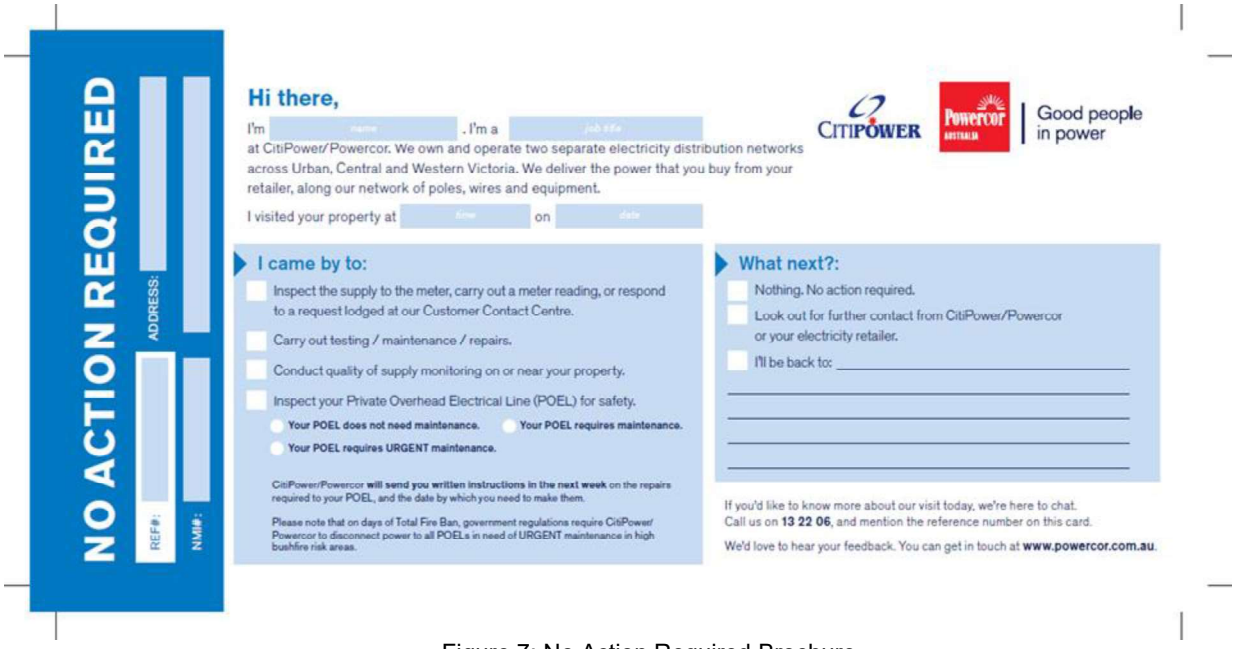

Figure 7: No Action Required Brochure

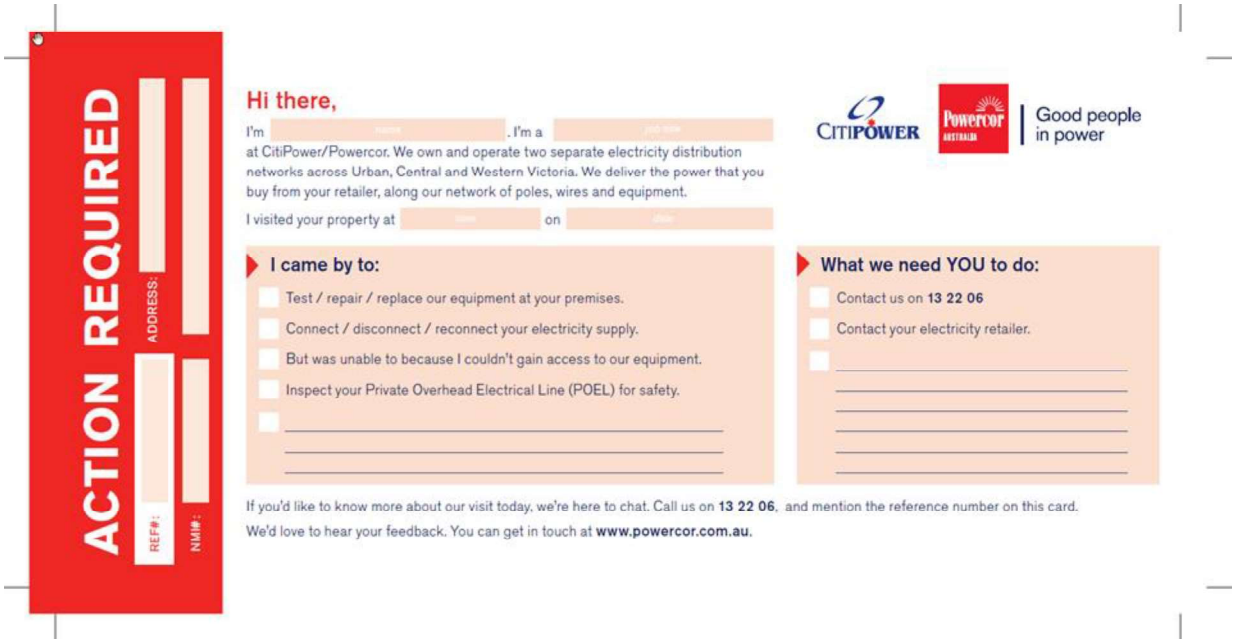

Figure 8: Action Required Brochure

Appendix E: PEL Inspection Notification Letter

CitiPower Pty
ABN 76 064 651 056
www.citipower.com.au

Head Office: 40 Market Street Melbourne Victoria
Telephone: (03) 9683 4444 Facsimile: (03) 9683 4499 DX 433 Melbourne
Postal address: Locked Bag 14090 Melbourne Victoria 8001 Australia

Powercor Australia Ltd
ABN 89 064 651 109
www.powercor.com.au

[*insert date*]

(Customer Name)
(Postal Address)

Supply Address:-
(Supply Address)

Account Number:-
(Account Number)

NOTICE OF INSPECTION

Dear Customer/Name

CitiPower and Powercor is inspecting Assets in your area as part of our routine 2.5 year inspection cycle.

In accordance with Section 113F of the **Electricity Safety Act**, please be advised that on or about [*insert date*] our asset inspector will inspect all private electric lines above the surface of land on the property you occupy that contain one or more private poles, except for those parts of the lines that are installed after the point at which they are connected to a building or other structure (not including a pole).

Our asset inspector requires safe, unhindered access to these lines for the purpose of this inspection. If the asset inspector is unable to gain safe, unhindered access to your private electric line, we will provide you with written advice that a time and date for inspection must be arranged.

The inspection may reveal that defects exist and maintenance is required on a private electric line on the property that you occupy. If this is the case, we will provide you with written notice of the maintenance work required to be carried out.

Please contact CitiPower and Powercor's Customer Contact Centre on telephone 132206 to speak with Mr John Perry if you have any queries.

Nick Osborn
Maintenance Planning Team Leader
CitiPower and Powercor

Figure 9: PEL Inspection Notification Letter

Appendix F: Powercor Asset Maintenance Compliance Measure

Asset Maintenance Compliance Measure

An example of how the Asset Maintenance Compliance Measure is calculated in Figure 10.

Index category	Index sub-category	HBRA		Weighting by sub category	BMI by sub category	BMI by Category
		Items not completed by policy date	Items completed by policy date plus items not completed by policy date			
Assets	Asset Inspection	5	100	40%	0.02	
	Asset defects (P42s)	10	100	30%	0.03	
	Asset defects (P2s)	10	100	30%	0.03	
				100%	**0.08**	8%

Total result means 8% of items were non-compliant in the reporting period.

Figure 10: Asset Maintenance Compliance Measure

Appendix G: Bushfire Mitigation Plan Documents

Table 18 lists the documents that Powercor will not change without first seeking ESV approval and are the only documents that form part of the BMP. References within these documents do not form part of the Bushfire Mitigation Plan.

Table 18: Bushfire Mitigation Plan Documents

Count	Document Title	Document No.	Revision Number	Date
1.	Maintenance Defect Priority Standard	CPPAL-ST-5060.01	1	14 October 2024
2.	Maintenance Procedure - Poles and Towers	PR-5062.01	1	3 December 2024
3.	Total Fire Ban Day Action Plan	PAL-PL-0009.1	3	3 December 2024

Appendix H: Exempt High Voltage Lines

Table 19 lists all REFCL isolating transformers and associated segments of polyphase electric lines that are exempt from the prescribed particulars as specified in the *Electricity Safety (Bushfire Mitigation) Regulations 2023*.This exemption allows for no REFCL protection requirements downstream from the isolating transformer.

Table 19: Exempt REFCL isolating transformers and associated segments of polyphase electric lines

Equipment	Tech ID No.	Description	Manufacture Part No.	Start-up date	Size/dim.	Asset Type	Description	Feeder	Latitude	Longitude
41114573	DSM-2255740800	RICHARDS-GWF-22kV	ISOLATING TRANSFORMER	23/07/2018	6000 KVA	Transformer	RICHARDS-GWF TRANS 1	CMN005	-37.05328633	144.2088558
41114642	DSM-2255741500	PARKER-BARKER ISOL KIOSK-22kV	ISOLATING TRANSFORMER	04/09/2018	6000 KVA	Transformer	PARKER-BARKER ISOL KIOSK TRANS 1	CMN003	-37.05593989	144.2178855
41114693	DSM-2254793400	MILLMAN-COLIBAN-22kV	ISOLATING TRANSFORMER	03/10/2018	3000 KVA	Transformer	MILLMAN-COLIBAN TRANS 1	EHK023	-36.70028259	144.294709
41114694	DSM-2254793500	HOWARD-COLIBAN-22kV	ISOLATING TRANSFORMER	10/10/2018	3000 KVA	Transformer	HOWARD-COLIBAN TRANS 1	EHK033	-36.70205484	144.3006561
41114705	DSM-2254793600	NOLAN-PARMALAT-22kV	ISOLATING TRANSFORMER	24/10/2018	3000 KVA	Transformer	NOLAN-PARMALAT TRANS 1	EHK022	-36.73742465	144.2816211
41114850	DSM-2254794000	MURPHY-POWELL-22kV	ISOLATING TRANSFORMER	21/10/2018	6000 KVA	Transformer	MURPHY-POWELL TRANS 1	EHK021	-36.74244546	144.3061055
41115120	DSM-2254794800	BUSHMASTER-FINN ISO KIOSK-22kV	ISOLATING TRANSFORMER	19/11/2018	3000 KVA	Transformer	BUSHMASTER-FINN ISO KIOSK TRANS 1	EHK033	-36.73583676	144.2911205
41115176	DSM-2266778600	WARROWIE-AKD-22kV	ISOLATING TRANSFORMER	16/12/2018	3000 KVA	Transformer	WARROWIE-AKD TRANS 1	CLC006	-38.3127766	143.6484954
41115185	DSM-2266778700	HEARN-FOREST-22kV	ISOLATING TRANSFORMER	12/01/2019	3000 KVA	Transformer	HEARN-FOREST TRANS 1	CLC004	-38.35150202	143.603656
41115326	DSM-2266778800	TRISTANIA-CLARK-22kV	ISOLATING TRANSFORMER	09/12/2018	6000 KVA	Transformer	TRISTANIA-CLARK TRANS 1	CLC006	-38.32867831	143.6093567
41115411	DSM-2266779100	CAPE OTWAY-DEANS MARSH-22kV	ISOLATING TRANSFORMER	26/10/2018	3000 KVA	Transformer	CAPE OTWAY-DEANS MARSH TRANS 1	WIN011	-38.29920032	143.9815015
41115418	DSM-2266779300	WINCH DEANS MARSH-SMITHS-22kV	ISOLATING TRANSFORMER	08/11/2018	3000 KVA	Transformer	WINCH DEANS MARSH-SMITHS TRANS 1	WIN011	-38.3864005	143.895713
41115664	DSM-2254798900	BARNARD-BENDIGO HEALTH-22kV	ISOLATING TRANSFORMER	12/11/2018	6000 KVA	Transformer	BARNARD-BENDIGO HEALTH TRANS 1	EHK034	-36.75152977	144.2807708
41115926	DSM-2266780200	CONNOR SCOTT-22kV	ISOLATING TRANSFORMER	16/12/2018	6000 KVA	Transformer	CONNOR SCOTT TRANS 1	CLC001	-38.33980968	143.5789919
41119756	DSM-2236602500	BASE HOSPITAL ISO-22kV	ISOLATING TRANSFORMER	13/09/2020	6000 KVA	Transformer	BASE HOSPITAL ISO TRANS 1	BAN005	-37.55858893	143.846243
41120153	DSM-2236611500	WOMBAT EX P8-KANGAROO ISO-22kV	ISOLATING TRANSFORMER	11/11/2020	1000 KVA	Transformer	WOMBAT EX P8-KANGAROO ISO TRANS 1	BAN003	-37.33642523	144.1988917
41120714	DSM-2266787500	HORDERN VALE EX P41A ISO-22kV	ISOLATING TRANSFORMER	11/09/2021	1000 KVA	Transformer	HORDERN VALE EX P41A ISO TRANS 1	CLC003	-38.75902253	143.4217546
41121104	DSM-2259773200	TRENTHAM EX P153A-SPRINGHILL I-22kV	ISOLATING TRANSFORMER	20/06/2021	1000 KVA	Transformer	TRENTHAM EX P153A-SPRINGHILL ISO TRANS 1	WND024	-37.33133272	144.3931719

Equipment	Tech ID No.	Description	Manufacture Part No.	Start-up date	Size/dim.	Asset Type	Description	Feeder	Latitude	Longitude
41122647	DSM-2266790200	EUCALYPT-COMMON ISO TX-22kV	ISOLATING TRANSFORMER	23/03/2023	3000 KVA	Transformer	EUCALYPT-COMMON ISO TX TRANS 1	WIN023	-38.08729083	144.0471054
41122666	DSM-2217771600	SURFCOAST-MESSMATE ISO-22kV	ISOLATING TRANSFORMER	12/08/2022	6000 KVA	Transformer	SURFCOAST-MESSMATE ISO TRANS 1	WPD022	-38.30112845	144.3219201
41123687	DSM-2217773000	HORSESHOE BEND-BLACKGATE ISO-22kV	ISOLATING TRANSFORMER	02/09/2022	6000 KVA	Transformer	HORSESHOE BEND-BLACKGATE ISO TRANS 1	TQY022	-38.28825641	144.3435761
41125694	DSM-2259780600	TYLDEN WOODEND-CHANTERS ISO-22kV	ISOLATING TRANSFORMER	21/03/2023	1000 KVA	Transformer	TYLDEN WOODEND-CHANTERS ISO TRANS 1	WND024	-37.33442819	144.4243762

Appendix I: Revision History

Table 20: Revision History

Rev No.	Revision Summary	Date
1.	• Plan submitted to ESV	27 June 2014
2.	• Plan amended to include ESV Direction relating to Powerline Replacement projects (**Section 8.5**). • Plan amended to include information relating to auditor training and qualification requirements (**Section 12.1**). • Plan amended to include information relating to ESV Direction regarding SWER ACR replacement/installation program as per 2012-2013 BFM Plan (**Section 8.5**). • Plan amended to include the requirements Electricity Safety (Bushfire Mitigation) Amendment Regulations 2015 dated 23 June 2015. • Plan amended to include information relating to vegetation auditing (**Section 12.1**). • Plan amended to include information relating to the trial installation of Rapid Earth Fault Current Limiters (REFCLs) to enable Powercor to meet the requirements of the proposed Electricity Safety Further Amendment (Bushfire Mitigation) Regulations 2015 (**Section 8.8**) • Plan amended to include an update on the SWER ACR Replacement/Installation Program (**Section 8.5**). • Plan amended to remove reference to the Conductor Tie Performance Study (**Section 8.8**). • Plan amended to include planned commission dates for the trial installation of Rapid Earth Fault Current Limiters (REFCLs) at the Gisborne and Woodend Zone Substations (**Section 8.8**). • Plan amended to include the new asset inspection training requirements (**Section 8.10**). • Plan amended to include information relating to the prioritisation of SWER ACR replacements and also information added regarding SWER ACR settings on TFB Days (**Section 8.5**).	10 July 2014 10 July 2014 3 September 2015 3 September 2015 3 September 2015 17 September 2015 18 December 2015 18 December 2015 18 December 2015 18 December 2015 4 March 2016
3.	• Plan amended to include the requirements of the Electricity Safety (Bushfire Mitigation) Amendment Regulations 2016 relating to Rapid Earth Fault Current Limiters (REFCLs), Electric Line Construction Areas and SWER ACRs. (**Section 6.5**) • Additional information regarding ACR protection application on TFB Days (**Section 6.6**) • Expanded descriptions in **Section 6.11 –** Training, and **Section 8 –** Fire Investigation • Added new milestone for vegetation reporting in **Section 9.4 –** BFM Milestones and **Appendix C** • Amended **Appendix A** TFB Day Action Plan, revised re-energisation of supply requirements • Removed **Appendix B –** Electric Line Clearance (Vegetation) Management Plan • **Rev 3.1 –** minor amendment to **Section 6.5**, additional information regarding the intended application of REFCL operating modes	5 December 2016

Rev No.	Revision Summary	Date
4.	• Added **Section 6.18** HVABC replacement program and **Appendix K** listing the project sites • Amended **Section 6.5.3** to include further information about Fuse-savers for the SWER ACR replacement program • Amended **Section 6.5.1 Table 1** to include the bring-forward of EHK zone substation into REFCL tranche 1	30 March 2017
5.	• **Section 6.5.1** REFCLs – additional text added regarding operating modes and annual compliance testing. REFCL program updated to reflect Terang and Ararat into Tranche 2 and Geelong to Tranche 3 • **Section 6.5.2** Notes relating to the construction solutions in the ELCA's have been added • **Section 6.5.4** Annual compliance report to be provided to ESV before the 1st August each year, pertaining to the Electricity Safety Act sections 120M, 120N, 120O and 120P (Bushfire Mitigation Civil Penalties Scheme) • **Section 6.6** Revised staging of SWER ACRs, HV Conductor Clearances, and ARVDs. ARVD direction concludes in 2018. • **Section 6.9** New technologies and initiatives – added the development of the Bushfire Risk Reduction Strategy which includes examples such as the IND-T trial on SWER lines and the bushfire risk modelling • **Section 6.15** Total Fire Ban Days – relocated and updated enhanced protection and suppression settings information from Section 6.6 • **Section 9.4** BFM milestones – removed the annual CFA fire hazard mapping project and Senior Management Program reviews. Added submission of annual compliance report to ESV and annual internal compliance audit of the Bushfire Mitigation Plan • **Section 10.1** Audits – addition of a compliance audit pertaining to the Electricity Safety Act sections 120M, 120N, 120O and 120P (Bushfire Mitigation Civil Penalties Scheme) • **Appendix A** - TFB Day Action Plan updated • **Appendix J** – Reference Documents added	20 Dec 2018
6.	• **Section 6** Updated Asset Management overview incl. latest asset inspection terminology and asset inspection and defect management timelines. • **Section 6.6.1** REFCL sections updated • **Section 6.7** Updates provided on each of the directions • **Section 6.8** New section added. ESV exemptions • **Section 6.12** New section added. Bushfire asset replacement and new technology implementation programs • **Section 6.21** HVABC replacement program completed • **Appendix A - TFB Day Action Plan** Updated to reflect revised personnel and role descriptions and new **section 5.12** added – Protocol for bypassing REFCLs on TFB days.	9 December 2019
7.	• **Section 6.12.1** Proactive wooden pole replacement program removed and replaced with 6.22 • **Section 6.22** Pole Management Improvement Program (PMIP) plan incorporated to monitor and report on the progress to ESV for oversight of implementation of the PMIP. • **Section 8 –** Fire investigation updated to include new Incident and Safety Performance Reporting Guidelines – Major electricity companies and link • **Section 10.2 –** Add PMIP plan for reporting purposes	8 April 2020

Rev No.	Revision Summary	Date
	• **Appendix J –** Include copy of accepted Pole Management Improvement Program MS Project plan	
8.	• **Section 6.6.1** REFCL section updated regarding operating modes and annual testing requirements • **Section 6.6.2** amended to include high voltage covered conductor trial projects. • **Section 6.7** updated SWER ACR information and removed references to armour rods and dampers as this direction was completed in 2018 • **Section 6.8** updated to include REFCL exemption for CRO and GL zone substations • **Section 6.21** removed. HVABC replacement program completed in 2018. • **Section 6.22** added Stay Management Improvement Plan • **Section 9.4** new milestone added **–** submission of annual report to IPART (NSW) • **Section 10.3** added Stay Management Improvement Plan • **Appendix A** TFB Day Action Plan updated regarding REFCL operating modes • **Appendix B** new milestone added **–** submission of annual report to IPART (NSW) • **Appendix G** HVABC replacement program removed due to completion in 2018, Appendix re-labelled. • **Appendix H** removed. All SWER ACRs have the functionality to be remotely controlled. • **Appendix I** removed. All SWER isolating substations are protected by a SWER ACR • **Appendix J** re-labelled to Appendix G, List of Reference Documents	15 June 2020
9.	• **Section 6.2** additional procedure included (Asset Maintenance Policy and Asset Management Plan Review and Development). Updated title of referenced policy (Inspection of Poles) • **Section 6.2.1** Updated title of referenced policy (Thermographic and Corona Inspection) • **Section 6.2.2** Updated title of referenced policy (Distribution Earthing Systems) • **Section 6.3** Updated title of referenced policy (Priority Policy) • **Section 6.4** document reference update (Manage Network Faults). Updated title of referenced procedure (Manage Fault Follow Up and Repair) • **Section 6.5** document reference updates (Distribution Surge Arresters), (Insulators, Associated Hardware & Bird Covers), (Spreaders and Spacers), (Management of Unserviceable Poles) and (Bare Conductor). Removed document reference (Overhead Conductors Asset Management Plan) • **Section 6.6.1 Table 1** updated to include Gheringhap and remove Corio and Geelong zone substations • **Section 6.6.1** Operating modes **–** Table 3 REFCL application on Powercor 22kV Polyphase Networks updated with REFCL settings in different conditions • **Section 6.6.1** Performance Caveats **–** updated to clarify REFCL out of service or bypass mode to facilitate fault finding • **Section 6.6.2.4** updated status on HVCC trials. • **Section 6.6.3** updated. SWER ACR program has been completed. • **Section 6.7** updated to reflect the completion of the SWER ACR and fitting of spacers on aerial lines directions in 2020.	19 April 2022 (revision 9.3)

Rev No.	Revision Summary	Date
	• **Section 6.8** updated to include exemption for wholly underground polyphase lines (REFCL protected) and exemption request for SWER lines • **Section 6.10** document reference update (Identification and Rectification of Defective PELs) • **Section 6.11** updated to include developments associated with smart meter technology, LiDAR capabilities to identify conductor clearances and trialling use of drones for enhanced pole top inspection and conductor condition assessment • **Section 6.12** updated to LiDAR technology fir clearance management • **Section 6.12.8** added – LiDAR technology development for clearance management • **Section 6.12.9** added – Remote Aerial Inspection. Aerial imagery using drone technology • **Section 6.14** title update to referenced document (Technical Training Compliance Policy) • **Section 6.15** document reference update (Incident Management Procedure) and (Crisis Plan). Removed reference (Coordinating Bushfire Mitigation with other Organisations) • **Section 6.17** document reference update (Incident Management Procedure). Removed references (Crisis and Emergency System Management Manual) and (Event Command Organisation Manual) • **Section 6.20** document reference update (Incident Management Procedure) • **Section 6.21** Minimum Pole Intervention volumes updated to include information pertaining to planned pole interventions • **Section 6.22** Stay Management Improvement Plan- updated to reflect current status and change to quarterly progress reports • **Section 6.23** added - Conductor clearances management, Leaning pole management, Asset inspection conductor clearance practices, Asset inspection training, competency and auditing, Conductor clearance plan and Approach • **Section 8** document reference update (Update ESV and AER Reportable Incidents in Cintellate) • **Section 9.2** document reference update (Update ESV and AER Reportable Incidents in Cintellate). Added reference (Incident Management Procedure) • **Section 9.3** document reference update (Asset Failure Investigation and Reporting) • **Section 10** document reference update (Management of Maintenance items Outside Policy) • **Section 10.1** document reference update (Audit and Inspection Program Requirements). Removed reference (Line Condition Observation) • **Section 11** document reference update (Bushfire Mitigation Plan Creation & Update) and (Bushfire Mitigation Index Review) • **Appendix A** updated personnel and role changes • **Appendix D** updated brochures • **Appendix G** updated to identify incorporated documents • **Appendix H** added exempt HV lines	
10.	• **General –** Updated document template. Updated text for clarity and readability and general formatting. Removed references to programs that have been completed. • **Plan Definitions –** moved to section 13 • **Section 1.1** Updated contacts and included Powercor Australia Ltd CAN	25 August 2023

Rev No.	Revision Summary	Date
	• **Section 1.2** Updated Regulation Compliance Information – Table 2 to reflect Electricity Safety (Bushfire Mitigation) Regulations 2023 • **Section 2.1** Updated to reflect Electricity Safety (Bushfire Mitigation) Regulations 2023 • **Section 3.1** Updated the bushfire policy to address ESV response provided on 21 June 2023 • **Section 4 -** Removed other key document reference to address ESV response provided on 21 June 2023 • **Section 4.1 –** Removed GIS extract figures • **Section 4.2 –** Updated bushfire risk areas figure (4) • **Section 4.3** Updated the bushfire risk area map to address ESV response provided on 21 June 2023 • **Section 6.2** Updated to reflect amendment to Asset Inspection Manual MA-0450. Also updated definition of inspection to be consistent with table 4 to address ESV response provided on 21 June 2023 • **Section 6.2.1 –** Updated to address ESV response provided on 21 June 2023 • **Section 6.4 -** Amended remedial maintenance, defect management section to address ESV response provided on 21 June 2023 • **Section 6.5 –** Amended for clarity • **Section 6.6** amended to reflect completion of the REFCL program. Updated table 6 to further clarify REFCL operating modes. Added a "REFCL Performance and Capability Assessment" section. Updated REFCLs and High Voltage Customers section in line with the completion of the REFCL program. • **Section 6.7 -** Amended to reflect the completion of ESV directions • **Section 6.7.2 –** Reordered section for clarity. Updated HV Covered Conductor to reflect the adoption of Amokabel and Hendrix HVCC solutions. • **Section 6.8** - Amended to reflect current status of exemptions • **Section 6.9 -** Added to address Regulation 7(1)(m) of the Electricity Safety (Bushfire Mitigation) Regulations 2023 • **Section 6.11 -** Amended to reflect "private electric line" requirements as specified in the Electricity Safety (Bushfire Mitigation) Regulations 2023 • **Section 6.12 -** Updated to reflect current status of new technologies • **Section 6.12.5 –** Updated LiDAR section to reflect current status. • **Section 6.13 -** Amended to address ESV response provided on 21 June 2023 • **Section 6.13 -** Removed remote aerial inspection to address ESV response provided on 21 June 2023 • **Section 6.16 -** Replaced DELWP with DEECA • **Section 6.22 -** Updated sustainable wood pole management program section to reflect completion of 1st year of program and communication to ESV on 3 February 2023 • **Section 6.22 -** Removed - in line with completion, the stay management improvement plan has been removed • **Section 6.23** - Amended to provide clarity and address ESV response provided on 21 June 2023. In line with completion, removed table 14 Key Milestones for Conductor Clearance program. • **Section 8 -** Updated reference to ESV incident reporting guideline	

Rev No.	Revision Summary	Date
	• **Section 9.1 -** Updated to reflect recent amendments to the Bushfire Mitigation Index, now referred to as the Asset Maintenance and Vegetation Performance Measures, • **Section 10 -** Updated to Line Condition Observation section to include reference to procedure. Removed section 10.3 related to stay management improvement program • **Section 12 –** Updated reference documents table • **Section 13 –** Definitions table updated and acronyms table added. • **Appendix A-I –** Included into the main body of the Bushfire Mitigation Plan document PL-0009. • **Appendix G –** Bushfire Mitigation Plan Documents table updated. • **Appendix I –** Revision history moved from front of document to Appendix I. • **PAL-PL-0009.1 –** Total Fire Ban (TFB) Day Action Plan has become a standalone document and included in Appendix G.	
10.1	• **Section 1.1 –** Amended contacts to include email. • **Section 1.2 –** Amended Table 2 • **Section 1.3 –** Added referenced documents clarification. • **Section 3.1 –** Amended to include reference to Bushfire Mitigation Policy • **Section 4.1 –** Amended in accordance with ESV reply • **Section 6 –** Amended section title. • **Section 6.1.1 –** Amended in accordance with ESV reply. • **Section 6.1.2 –** Added to include other above ground asset inspection, including Table 5. • **Section 6.1.3 –** Amended thermal and corona imaging section to add further details. • **Section 6.3 –** Updated fault follow up section. • **Section 6.4 –** Amended in accordance with ESV reply. • **Section 6.5 –** Amended table 7 to clarify REFCL operation in no rating and moderate ratings. • **Section 6.7 –** Removed redundant information. • **Section 6.8 –** Amended to clarify. • **Section 6.10 –** Amended Private Overhead Electric Line Section • **Section 6.11 –** Amended to include quarterly reporting. • **Section 6.12.1 –** Amended to include program numbers and timeframe. • **Section 6.12.2 –** Amended to clarify program timeframe. • **Section 6.12.3 –** Amended to reduce detail as discussed with ESV. • **Section 6.13 –** Amended conductor clearance section in response to ESV reply. • **Section 10.1 –** Amended to provide clarification of automated daily report. • **Section 12 – Updated reference document** • **Appendix H – Updated** • **Appendix I – Added** • **Appendix J – Updated, added section 10.1**	27 September 2023
10.2	• **Section 6.3 –** Amended to address ESV feedback received 6 October 2023 • **Section 6.20 –** Amended to clarify spark arrester equipment. • **Section 6.12.2 -** Amended to address ESV feedback received 6 October 2023	10 October 2023

Rev No.	Revision Summary	Date
	• **Section 6.12.3 -** Amended to address ESV feedback received 6 October 2023, including reinstating text from revision 10. • **Section 6.13 –** Amended to clarify conductor clearances relating to T-on and T-off structures and to address ESV feedback received 6 October 2023. **Appendix G –** Amended to include date for TFB day action plan (PAL-PL-0009.1)	

11	• **General –** Updated overall document sections, table numbering etc to align with changes. Removed references to programs that have been completed. Replaced reference to POEL with PEL – Private Electric Lines
	• **Section 2.2 –** Updated table 3 to reflect 2023 data.
	• **Section 4.2 –** Included voltage reference for Lindsay Point (33kV & 19.1kV SWER)
	• **Section 6.1 –** Updated with new document references.
	• **Section 6.1.1 –** Amended to incorporate:
	  ○ 3-year full inspection in HBRA. Removed reference to above ground inspections in HBRA.
	  ○ 1-year (+ one month) full inspection for AC serviceable poles. Removed reference to above ground inspections.
	  ○ Updated with new document references.
	• **Section 6.1.2 –** Amended to incorporate 3-year full inspection in HBRA. Updated with new document references.
	• **Section 6.1.3 –** (New) added to include implementation of Resistograph (RESI) drill inspection technology.
	• **Section 6.1.4 -** (New) added to include implementation of LiDAR Conductor Clearance inspection methodology.
	• **Section 6.1.5 –** Removed reference to Corona Inspections. Updated with new document references.
	• **Section 6.2 -** Updated with new document reference. Removed reference to priority FFU14 in table 6.
	• **Section 6.4 -** Updated with new document references, including consolidation of asset type description.
	• **Section 6.5 –** Table 9 updated to include reference to connection of temporary generator.
	• **Section 6.10 -** Updated with new document references. Amended reference to POEL with PEL – Private Electric Lines
	• **Section 6.11 –** Removed reference to Non-destructive testing and LiDAR clearance detection.
	• **Section 6.12.1 –** Updated to advise re-establishment of EDO replacement program.
	• **Section 6.12.2 –** Updated to reflect status of program.
	• **Section 6.12.3 -** Updated with new document references. Pole intervention program volume table updated as at end 2023.
	• **Section 6.13 –** Updated to include implementation of LiDAR inspection methodology. Updated with new document references.
	• **Section 6.19 –** Updated to provide further clarity and included a new reference document.
	• **Section 10.2 –** Updated to include Powercor's internal Asset Inspection Group. Updated with new document references.
	• **Section 12 –** Updated reference document table.
	• **Section 13 –** Updated definitions document table.
		Dec 19, 2024

Rev No.	Revision Summary	Date
	• **Appendix C –** Amended section for clarity and included reference to procedure Minimising Fire Start Risk on Total Fire Ban Days (PR-0016) • **Appendix G –** Updated Bushfire Mitigation Plan documents. • **Appendix H –** Updated section to summarise exempt line segments. • **Appendix I –** Bushfire Mitigation Policy removed and included as a new reference document.	