



# BUSHFIRE RISK MANAGEMENT PLAN

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# 1 OVERVIEW

Essential Energy operates Australia's largest electricity network spanning 95 per cent of New South Wales and parts of Southern Queensland.

Essential Energy has a significant investment in its electricity network and non-system assets which are operated in a cost efficient and effective manner to ensure value is maximised for customers and stakeholders. This involves prudent risk management planning and ensuring that Essential Energy's network services remain safe, reliable, and sustainable. This plan details Essential Energy's strategies to manage the potential risks associated with the company's assets causing fire ignition.

South-eastern Australia contains large areas of bushfire prone lands. Essential Energy operates a predominantly rural network generally considered to be bushfire prone environments with different degrees of risk to the public from low to high.

The combination of oil-bearing eucalyptus trees, dry grass, low humidity, and hot, gusty winds result in periods of high fire risk. Fires can cause enormous property, livestock and wildlife losses and pose a real threat to human life.

All overhead energy networks are a potential source of ignition and pose the risk of causing widespread and significant damage should a network fault occur during periods of high risk.

## 1.1 Consultation

Essential Energy's Bushfire Risk Management Plan (BRMP) is developed in consultation with, and encourages feedback from, relevant key stakeholders. These include (but are not limited to) Local Councils, residents, and local community groups. Consultation efforts include:

- > direct liaison with Local Councils and Regional Advisory Groups (community representatives) and other identified community groups
- > written notice to relevant Essential Energy customers
- > publication in a local newspaper coupled with exhibition placement at the relevant Local Council/s.

## 1.2 Feedback and Review

Essential Energy will review this Plan regularly to promote opportunities for continual improvement and facilitate community and stakeholder consultation. Feedback can be provided at any time and will be considered during the next scheduled Policy review.

Written submissions should be addressed to:

Manager Network Risk Strategy  
PO Box 5730, Port Macquarie NSW 2444  
Telephone: 132391

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## **2 OBJECTIVES OF THE PLAN**

The Plan aims to:

- > assist relevant managers and field personnel understand the activities associated with reducing fire ignition potential within the Essential Energy network area
- > establish a framework of strategies to reduce the likelihood of fire ignition as it relates to Essential Energy assets and manage the risks associated with operating powerlines near vegetation
- > comply with regulatory requirements and expectations.

Key aspects of the plan include the management of:

- > vegetation clearances relating to powerlines
- > asset inspection regimes (including annual Pre-Summer Bushfire Inspections)
- > private powerlines
- > asset maintenance including defect priority and rectification
- > refurbishment of ageing infrastructure.

Essential Energy is committed to, and responsible for, implementing systems to measure, monitor, manage, bushfire risk including provision of appropriate resources to support relevant strategies and activities.

### **2.1 Legislation**

This plan is provided to meet the objectives and requirements of the NSW Electricity Supply (Safety and Network) Regulation 2014 in accordance with AS5577. This includes consideration of industry codes, guidelines, and practices as well as published standards.

The primary objective of this plan is to meet the requirements of clauses 5, 6, 7 and 8 of the regulation. This includes ensuring the network is safe in its design, construction, and operation and to support:

- (a) safety of members of the public
- (b) the safety of persons working on networks
- (c) the protection of property
- (d) the management of safety risks arising from the protection of the environment (for example, preventing bush fires that may be ignited by network assets)

The plan components which address these legislative requirements are indicated in Table 1.

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**Table 1 – Plan requirements to meet legislative objectives**

Regulatory provisional items	The Plan CEOP8022
The legislative requirements	Section 2
provisions that identify bush fire prone areas and that set out a process for identifying network assets capable of initiating bush fires and a system for ensuring that all such information is kept up-to-date	Section 4.1
provisions that ensure that network assets located in bush fire prone areas and capable of initiating bush fires are inspected, tested and maintained in accordance with the maintenance schedule set out in analysis of hazardous events in the plan	Sections 4.1; 4.2; 4.3; 4.4; 4.5; 4.6 Sections 5.1; 5.2; 5.3; 5.4; 5.5;
provision for the review of equipment types or construction methods known in their operation or design to have bush fire ignition potential and a mitigation strategy in relation to their use	Section 4.7; 4.8; 4.9; 4.11 Section 5.3; 5.4; 5.5 Section 8
information relating to rights and duties of the customers with private lines and the dangers of trees coming into contact with those lines	Section 4.5; 4.12; 4.15 Section 9
provisions that ensure that any private overhead electricity lines located in bush fire prone areas and capable of initiating a bush fire are inspected, tested, and maintained in accordance with the maintenance schedule set out in the analysis of hazardous events in the plan, and that standards are enforced by the network operator	Section 4.5 Section 9
provision for a complaints recording system in relation to bush fire risk management and provisions that ensure that appropriate investigations and remedial actions are undertaken as required	Section 4.14; 4.15
provision for liaison and consultation with the NSW Rural Fire Service, New South Wales Fire Brigades, councils for relevant local government areas and any other relevant government departments	Section 4.13 Section 7.3 Section 11
information for the general public about the fire hazards associated with overhead power lines and vegetation, particularly during storms and conditions of high fire hazard	Section 4.12 Section 9
a description of any special procedures or precautions proposed to be taken during conditions of very high fire danger, including work practices by staff, fault location procedures, automatic and manual reclosing of lines and protection settings	Section 6 & 7
a description of the reports to be made to the Director-General in relation to the control of the risk of bush fire resulting from the network operator's transmission or distribution system ("the schedule of reports")	Section 10.1 & 10.2
A network operator must measure its performance against its safety management system.	The report pertaining to bushfire performance is; Electricity Network Performance Report (ENPR) Audit of the ENSMS and BRMP apply.

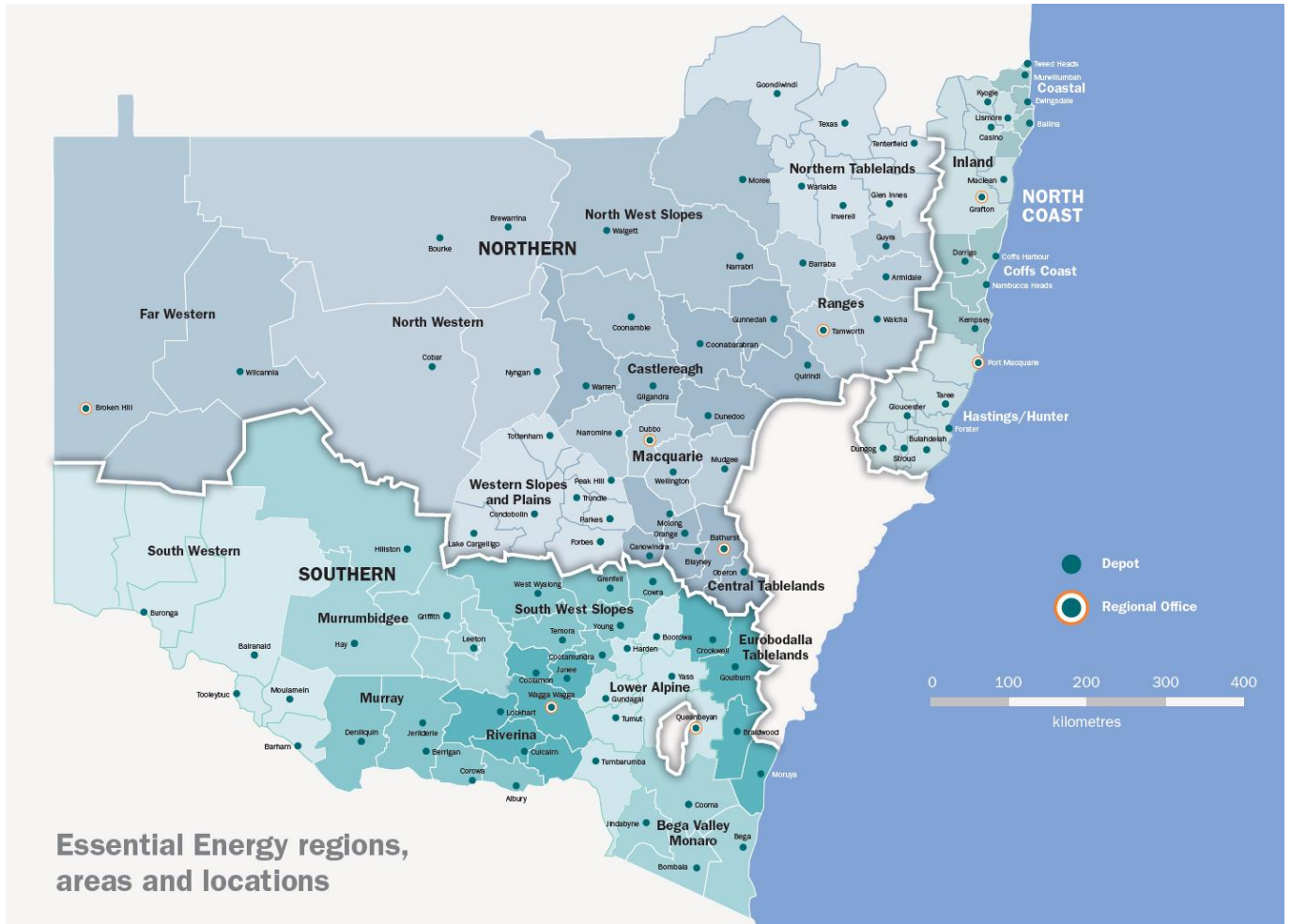


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### 3 SCOPE

This plan covers Essential Energy’s network assets and operations within the areas identified on the map below. This includes over 200,000 kilometres of powerlines and 1.4 million power poles that span diverse terrain and climatic conditions from subtropics to Alpine areas and plains.

Essential Energy Network Areas



Essential Energy networks include a small number of line assets in the Queensland franchise area.



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## 4 PREVENTATIVE STRATEGIES

Essential Energy has developed and implemented various strategies to prevent or minimise the occurrence of fire ignition from its energy network assets. The following topics relate specifically to bushfire mitigation policy; many others exist which may have an indirect relationship.

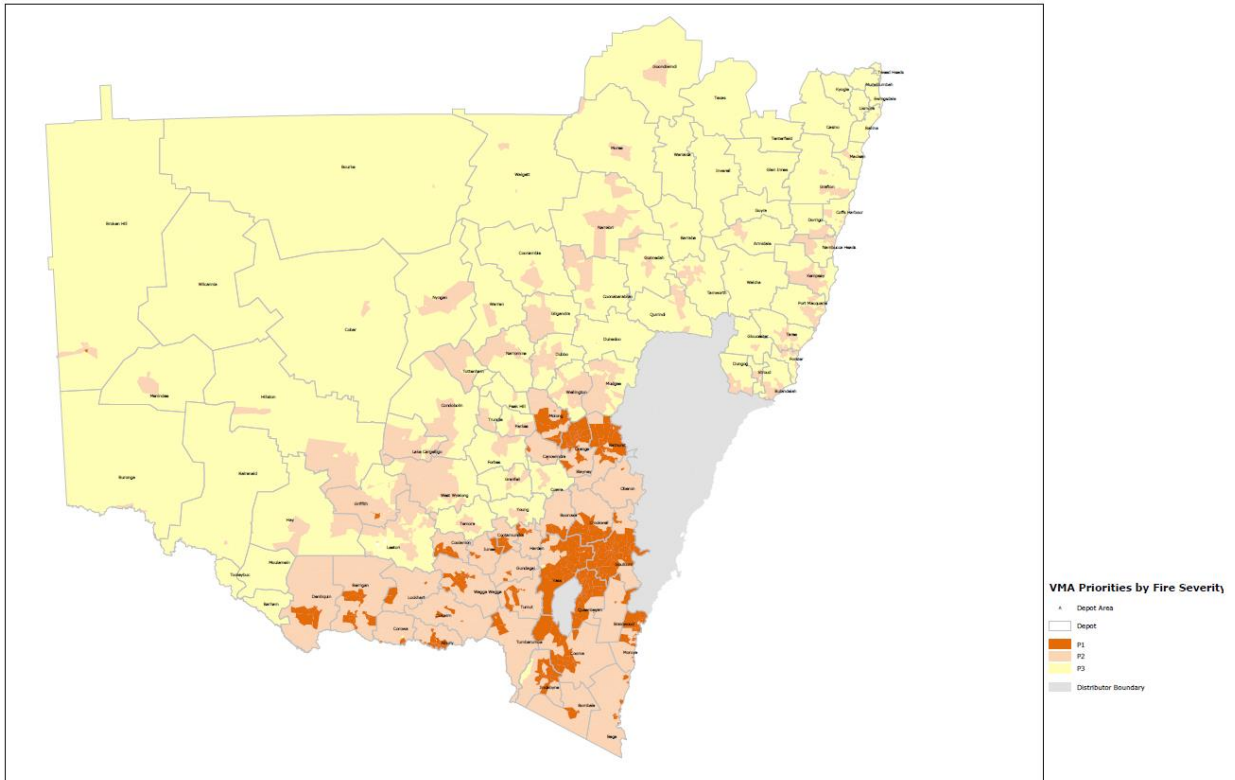
Strategies related to bushfire mitigation include:

### 4.1 Identification of hazardous bushfire areas

Essential Energy has identified locations which are considered to be generally *bushfire prone*<sup>1</sup>. The bushfire prone lands are further segmented into *fire risk* classifications based on fire risk modelling. The modelling considers the consequences and probability of fires which may originate from network assets. Fire risk levels and priorities are determined through modelling of the network using the Phoenix Rapid Fire system as well as internal modelling using fire start history and other attributes. This determines the areas considered the highest fire risk priority and therefore subject to a pre-summer aerial inspection.

Fire risk classifications (P1, P2, P3, P4) are used to determine fire mitigation work priorities, pre-summer inspection requirements, investment program priorities, and operational procedures. Procedure CEOP 8067 contains descriptions of fire risk classifications and priority zones. Below is a sample map of these zones based on designated maintenance areas within the Essential Energy footprint.

Map indicating fire risk prioritisation zones.



<sup>1</sup> *Bushfire prone* status is applied to rural locations by Essential Energy and is defined as “land capable of carrying or supporting wildfire”.

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### 4.2 Asset condition monitoring (inspections) - strategy

Condition monitoring of existing network assets consists of both routine and risk based inspection programs. Inspections are based on cyclic assessments as well as other assessments where there is identified need for additional monitoring. The current inspection regimes include:

- a) Pre-summer aerial inspections of high risk network locations<sup>2</sup>, as defined by network modelling. It identifies fire risk potential associated with vegetation clearances and asset maintenance. Refer to section 6.1 for program description.
- b) Routine ground based pole and line inspections.
- c) Routine aerial inspection services including; Lidar surveys and Pole-top image capture.
- d) Routine radial transmission and sub-transmission live line inspections.
- e) Other specified asset inspections including but not limited to: substation earthing systems, pit & pillar, zone substation inspections, reclosers & other protection equipment, feeder studies, etc.

### 4.3 Special operational conditions

Essential Energy has developed operating procedures that relate to reducing fire risk or to reducing public and employee risk associated with fires. This includes patrol of feeders prior to manual reclosing on days of high fire danger and field procedures for works performed on days of Total Fire Ban.

Essential Energy's policy for non-emergency work is to observe recommended work activity limitations during days of high fire danger or abnormal conditions, and undertake work site hazard assessments that consider risk factors such as fire start, prior to works commencing.

Employees are provided equipment and training for firefighting as a precaution in the event that work procedures result in ignition of a fire or they come into contact with fires during the course of their duties. Essential Energy may postpone or cancel work activities with a high fire ignition risk and planned supply interruptions where possible, in areas of predicted extreme fire weather.

This ensures that employees are available for rapid deployment for fault and emergency works and customers have electricity supply available during these periods.

### 4.4 Vegetation management

Vegetation control is managed in accordance with CEOP8008 Vegetation Management Plan and includes assessing and controlling risks associated with vegetation in close proximity to assets. The vegetation clearing work program considers requirements of ISSC3 – *Guide for the management of vegetation in the vicinity of electricity assets (2016)*.

Essential Energy's network is monitored and assessed by qualified vegetation personnel who are responsible for undertaking risk assessments and scoping work for action by field crews. Work requirements for private properties and sensitive areas are subject to negotiation and consent in relation to powers under the Electricity Supply Act 1995 (the Act).

While Essential Energy endeavours to work cooperatively with property owners, the Electricity Supply Act 1995 and associated Electricity Supply (Safety and Network Management) Regulation 2014 require Essential Energy to manage the public safety risk in regard to trees near powerlines.

The Act provides for powers to enter properties to maintain clearances and in certain circumstances, costs for such works may be imposed on property owners under a Section 48 notice.

Essential Energy's vegetation works program incorporates frequent inspection and maintenance cycles for urban and rural areas. High fire danger areas are also subject to annual review via pre-summer aerial inspection which identifies vegetation clearance risks.

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<sup>2</sup> High risk locations are summarised in section 5.1 and defined in detail in policy CEOP 8067.

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Essential Energy negotiates the full removal where possible, of potentially hazardous trees or trees requiring frequent maintenance attention. Alternatives - such as line relocation or conversion to aerial bundled conductor (ABC), covered conductor (CCT) or underground - are considered for heavily treed sections of line where clearing is problematic.

### 4.5 Private lines risk management

Essential Energy's management of private lines is set out in policy CEOP2339 Private Lines: Management Plan.

In the interest of public safety, Essential Energy will, using its' best endeavours, notify owners of private property with unsafe installations. Repairs or isolation is expected to be carried within specified timeframes otherwise Essential Energy may do the repairs at the owners' cost. This is a mandated requirement under Division 2A - *Special powers for bush fire prevention*: Section 53 of the Electricity Supply Act 1995.

Essential Energy currently encourages property owners to replace existing private overhead powerlines with underground installations as they reach the end of their useful life and substantial re-investment is required. This is achieved through consultation with property owners at the time of replacement. Incentives are provided including disconnection and removal of the existing overhead private assets at no cost to the owner.

Vegetation near private overhead powerlines is currently managed by Essential Energy's vegetation contractors but costs may be passed on to owners particularly where inappropriate plantings under powerlines have been deliberately placed and allowed to grow into the safe clearance space.

### 4.6 Asset maintenance and refurbishment

Essential Energy implements maintenance programs based on industry standards and emerging new methodologies. Targeted refurbishment programs have been developed and are continuously reviewed for effectiveness. These programs drive replacement through ongoing monitoring and assessment prior to asset failure.

### 4.7 Network planning

Network planners are required to monitor network performance and configuration to ensure it meets expectations and service demands. Poor performing feeders are highlighted for attention and corrective work programs. Fire risk is a consideration as outlined in the Capital Works Planning Guidelines and Planning database.

### 4.8 Industry research & technology

Essential Energy uses industry research in relation to fire ignitions, including reviewing commercially available alternative materials, network standards, and technologies that enhance either condition monitoring or network function.

Research includes participation in industry research, trials and engineering conferences. Review of major fire events associated with electrical network assets is undertaken to determine what lessons can be learned. These include events such as the Victorian Ash Wednesday and Black Saturday Bush Fires.

Essential Energy is continuously evaluating new technologies such as LiDAR (Light Detection and Ranging), and business applications, in order to better manage the risks associated with owning and operating network assets.

### 4.9 Design and construction standards

Design and construction standards assist with fire risk management by ensuring network construction quality. This builds resilience of the network to unplanned breakdown and therefore fire start risk. This is incorporated into the network design, procurement, construction, and commissioning phases.

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Essential Energy's Overhead Design Manual CEOM7097 requires all new service connections in rural areas to be underground or insulated unless exempted, so as not to increase the bushfire risk. This manual also places conditions on conductor and construction type for designated fire risk areas.

Construction standard examples associated with our network includes (but is not limited to): Specification of material types and asset components; Specification of construction types e.g. pole top construction assemblies which provide adequate phase clearances; construction practices which promote insulated or underground components, LV spreader installation, and asset protection zones.

### 4.10 Bushfire Risk Management Committees

In addition to the senior organisational management structure, Essential Energy has adopted a two tier bushfire mitigation committee structure to regularly review bushfire mitigation matters.

This includes a Bushfire Risk Assurance Panel (BRAP) consisting of Senior Management representatives from various divisions, which report directly to the Executive Management team. Essential Energy has also established a Bushfire Risk Working Group (BRWG) which is made up of operational level representatives with a focus on fire mitigation activities and projects.

The structure of the **BRAP (tier 1)** is chaired by the GM Asset Management and includes the chairperson of the Bushfire Risk Working Group as one of its members as a line of communication between the two groups. This panel reports through to the Executive Leadership Team of Essential Energy as required on bushfire mitigation matters.

The structure of the **BRWG (tier 2)** includes representation from various business functional areas including:

- > asset inspection and vegetation management
- > aerial patrol coordination
- > network risk strategy
- > maintenance and refurbishment strategy
- > insurance, claims & liability
- > regional management
- > network asset management systems
- > other co-opted members as required.

### 4.11 Fire start reporting and analysis

Fire start investigation, reporting and analysis is used as an opportunity to review performance and improve risk mitigation strategies. Analysis includes consideration of events within the operational footprint as well as the industry. Essential Energy works collaboratively with other distributors to share information and experience regarding fire risk where the opportunity exists.

#### Reporting

Internal business reporting is used to (i) inform the business of performance in relation to fire starts from the network, (ii) to understand the level of risk exposure and set maintenance priorities. Reports are provided weekly, monthly, and annually for those responsible for risk management and work delivery.

External reporting is provided to governing state bodies such as IPART, including network performance associated with fire risk and safety plans.

#### Bushfire Mitigation Index (BMI)

Essential Energy has developed a bushfire mitigation index report for the purposes of monitoring risk levels leading up to and during the fire danger period. The BMI is described in detail in CEOP 2087 and monitored by the Bushfire Risk Assurance Panel and Bushfire Risk Working Group. The purpose of the index is to compare the state of fire season readiness from one period to the next. The KPI's making up the index are considered the activities which have greatest impact on the level of fire risk exposure. These include inspections; asset maintenance, vegetation clearances; and functions associated with the pre-summer patrol.

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### 4.12 Public safety awareness

The development and ongoing review of an unclassified 'Public Safety Electrical Awareness Plan' is incorporated into Essential Energy's fire mitigation strategy and Electricity Network Safety Management System.

### 4.13 State emergency and fire agency relations

Fire management and response agencies are considered key stakeholders in supporting Essential Energy in managing fire risk. Essential Energy participates in preparing and planning for fire seasons and operational event management through the NSW bushfire management structures and Local Government emergency management structures.

Essential Energy has a formal relationship with the State Emergency Management Centre (SEMC) via a sub-group representing utility businesses. This is coordinated by the Energy & Utilities Functional Area Coordinator (EUSFAC). An Energy & Utility Services Plan (EUSPlan) deals with major incident management and coordination by the sub-group in consultation with distributors or their representatives.

Agency relationships enhance fire mitigation strategies in two ways: by contributing to the planning and preparation of coming fire seasons, and when fire events do occur, ensuring the relevant agencies work effectively together to bring events under control and minimise any impact.

### 4.14 Compliance requirements

Essential Energy's fire mitigation strategy takes into consideration the requirements associated with relevant Acts, Regulations, and industry Codes of Practice. Essential Energy pays attention to industry regulations that relate specifically to fire risk mitigation.

Central to this is the development and preparation of plans such as the *Bushfire Risk Management Plan (NSW)* in accordance with the Electricity Network Safety Management System plan. These plans are subject to external audit by regulatory bodies.

### 4.15 Customer enquiries

For general enquiries customers, can contact our 24/7 call centre on 132391. Customers may report assets which appear to be a potential fire hazard at any time.

Essential Energy has a commitment for concerns raised by the customers or the general public to affect timely and efficient resolutions.

Our Complaints and Dispute resolution procedure is consistent with Australian Standard AS IOS 10002-2006 (Customer satisfaction – Guidelines for complaints handling in organisations).

A copy of the Essential Energy Complaints and Dispute resolution procedure is available at [www.essentialenergy.com.au/content/complaints-and-dispute-resolution-procedure](http://www.essentialenergy.com.au/content/complaints-and-dispute-resolution-procedure).

CEOH4502.11 How to Manage Complaints, documents the methods of receiving a complaint and logging it in the Contact Management database.

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### 5 PREVENTATIVE PROGRAMS OR WORK

The following is a list of work programs that assist with preventing fires as related to each of the preventative strategies mentioned in section 5.

#### 5.1 Asset condition monitoring (inspections) – work programs

Essential Energy has implemented the following inspection programs:

- > **Annual pre-summer bushfire inspections (PSBI) of rural network components deemed a high fire risk based on risk modelling preceding the fire danger declaration periods.** This provides identification of maintenance tasks with a prioritised target completion date of 1<sup>st</sup> October<sup>3</sup>. Ground line assessment of 'No fly zones' is included. This program is specifically a pre-summer condition assessment of assets in high risk locations to identify any risks that may not have been identified by other routine asset or vegetation inspection programs. This is performed annually in preparation for the fire danger period, using aircraft to provide advantages such as:
  - Review of large sections of network in relatively short timeframes in the most cost effective manner.
  - The ability to observe asset condition from a top down (aerial) perspective which is particularly helpful in identifying the cross-arm deterioration and pole top component condition, which is a different point of reference to routine ground based inspections
  - The detection of storm damage to assets, or vegetation clearance issues that may have occurred in between routine inspections.
- > Routine ground based pole and line asset inspections - carried out in accordance with policy CEOP2446 and industry standards.
- > Routine aerial services including High Definition image pole-top analysis, Lidar engineering survey and Lidar vegetation survey
- > Routine radial sub-transmission line inspections.
- > Inspections of specified assets and equipment such as substations, switching cubicles, low voltage pits and pillars, earthing systems, are conducted in conjunction with other routine inspections.
- > Six monthly condition monitoring of targeted critical distribution equipment
- > Routine thermo-vision program for specified assets to identify hot connections. This typically applies to urban areas and other critical or heavily loaded network segments.

#### 5.2 Vegetation management works programs

Essential Energy has developed work programs to maintain the required clearance space from vegetation.

In determining the locations where work will be required to maintain the clearances specified, Essential Energy will utilise the following inspection programs:

- > Ground line vegetation clearance inspections i.e. pre-listing by designated roles. These inspections take place cyclically in accordance with service provider specifications. Refer to CEOP8008 and CEOP2021.
- > Annual aerial inspections of high risk bushfire prone areas e.g. PSBI program
- > Aerial Patrol and Analysis (LiDAR) surveys
- > Associated audits by Essential Energy employees.

A detailed inspection of spans is conducted to determine the clearance requirements, the method of maintaining the required clearance space between vegetation and power lines, and customer consultation.

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<sup>3</sup> Conditions outside of Essential Energy's control may impact the completion date e.g. unseasonal wet conditions which prevent site access.



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In assessing the most appropriate method, consideration is given to site conditions.

Information gathered by inspections forms the basis of the vegetation work packaging system and allows:

- > appropriate planning and scheduling
- > identification and quantification of equipment and accredited personnel required
- > funding allocation
- > community and customer consultation
- > distribution of work packs to field crews for actions specified (trimming, mulching, spraying, removal, etc.)
- > risk assessment and prioritisation.

As well as managing the clearance space, Essential Energy also gives consideration to identifying 'hazard trees' as outlined in the vegetation plan. These may be outside the clearance space but still have potential to fall and impact assets. Where hazard trees have been identified, they will be subject to the same treatment as trees infringing clearances - that is generally trimmed or removed.

### 5.3 Other engineering solutions and new technologies

A risk management approach to the development of network standards has seen various changes to them to reduce the risk of bushfires. Examples of these changes include the use of underground cable, covered conductor (CCT) for overhead high voltage and promoting underground or insulated low voltage lines in rural areas and low voltage spreaders on bare overhead lines to prevent conductors clashing.

Also, a move to high voltage 'delta' pole-top construction, which provides greater vertical and horizontal clearances between conductors, reduces the likelihood of clashing conductors from external sources such as wind, birds, or vehicle collision.

Essential Energy's construction standards consider improving insulation levels and clearances by specifying materials, assemblies, and components.

### 5.4 Asset replacement/refurbishment programs

Essential Energy has implemented several asset refurbishment programs aimed at replacing assets before they reach failure or 'end of life'. This includes, but is not limited to:

- > air break switch (ABS) replacement program – replaced with fully enclosed gas switches. This improves insulation levels and reduces the likelihood of ignitions resulting from fauna contact.
- > distribution substation & fuse site refurbishment program – this is an assessment and prioritised refurbishment of targeted substation sites to enhance safety, reliability, and construction standards. Work includes replacing porcelain expulsion drop out fuses with polymer types complete with sparkless fuse elements, replacing bare conductor bridging with insulated cable (CCT), insulating HV bushing with shrouds, ensuring high voltage dropper cables are supported, and replacement of lightning arrestors with new polymer types
- > line refurbishment – which includes renewing poles and conductors where required as well as associated pole top components such as tie wires, insulators, and cross-arms
- > an extensive condemned pole replacement and staking program
- > identifying 'at risk' low voltage lines on private rural properties and replacing with underground or insulated systems. This includes offering financial incentives to owners who choose to replace overhead private lines with underground.

### 5.5 Remedial maintenance programs

Remedial maintenance work is determined predominantly through Essential Energy's inspection processes. This maintenance work is the rectification of the tasks identified, reported, and captured in our asset management system. Defects are reported by:

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- > Annual pre-summer aerial inspections
- > Ground line asset inspection regimes
- > Vegetation scoping
- > Routine aerial surveys (HD Imagery and Lidar)
- > Essential Energy personnel/contractors utilising a Maintenance Work Log form.
- > The general public

Tasks identified are allocated risk severities based on industry experience to determine failure probability. The risk severity classifications are:

Asset Tasks	Cat 1	Emergency tasks
	Cat 2	Urgent tasks
	Cat 3	Risk Tasks
	Cat 4	General Maintenance tasks
Vegetation Tasks (safety clearance encroachments)	A1	75 - 100% encroached
	A2	50 - 75% encroached
	A3	25 - 50% encroached
	A4	0 - 25% encroached

Tasks are recorded in the Asset Management System and monitored through export of data in routine and adhoc management reports.

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## 6 PREPARATIONS FOR THE BUSHFIRE DANGER PERIOD

### 6.1 Pre-Summer Bushfire Inspection (PSBI) - Pre-summer Aerial Inspection

Annual pre-summer aerial inspections are conducted of high fire risk locations preceding the FDP periods. The inspections will take approximately 2 months to complete typically commencing in February. This allows a reasonable period of 5 months<sup>4</sup> to package, issue, and complete work identified by pre-summer inspections. This timeframe takes into consideration that the FDP periods may vary in different districts across NSW and bringing the declaration forward in some districts can be accommodated by modifying inspection and work schedules. Essential Energy monitors potential changes to declaration periods through RFS for advice at the earliest opportunity.

### 6.2 Issuing and Prioritisation of Pre-summer Works

Network maps are issued to pre-summer inspection contractors each year which highlight the network assets (and private lines) to be patrolled. The process for management of PSBI work i.e. issuing network data to aerial contractor, receiving data, and loading data to AMS/GIS systems is contained in;

- CEOM7005.02 Inspection and Assessment of OH Structures and
- CEOP2398 Aerial Patrol Work Tasks and GIS Data Guideline

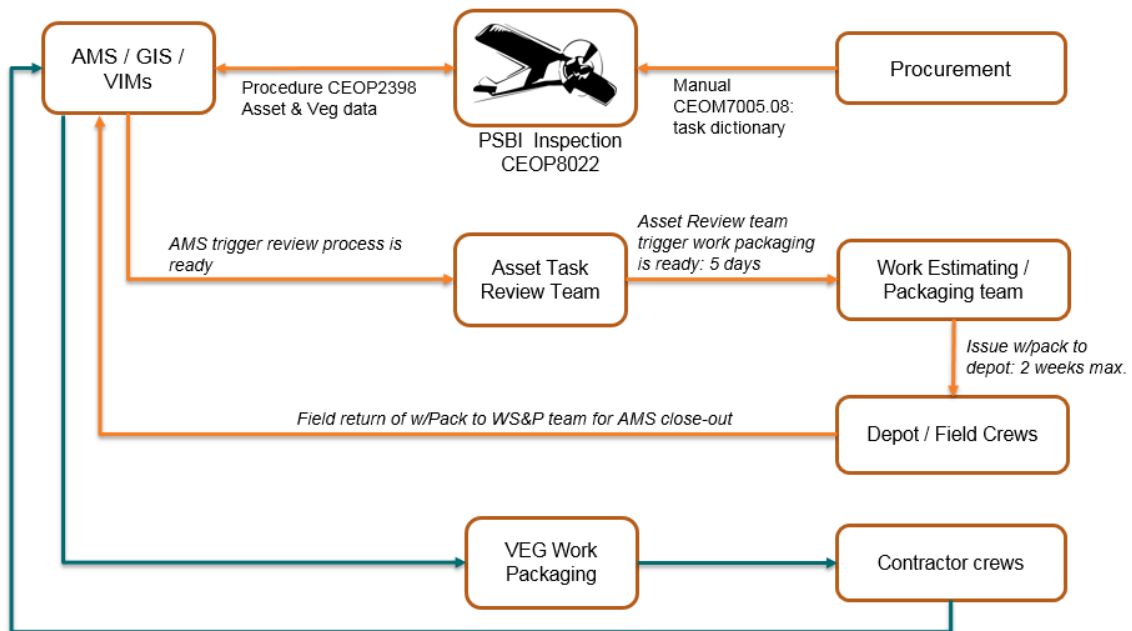
Timeframes may need to be amended or accelerated to accommodate variation in declaration periods. Instruction will be provided if required, to ensure resources can meet the expected demands for completion of works prior to the FDP.

### 6.3 Completion of Pre-summer Works

Well established processes are in place and managed by the AMS team for completion and close-out of PSBI work in the asset management system.

#### 6.3.1 Work pack completion process

Refer to CEOP2398.



<sup>4</sup> Subject to weather and access

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### 6.4 Monitoring and reporting of PSBI work

PBSI work progress and status is monitored through reporting to the BRAP / BRWG / ENIMC / AP&A Group meetings on a regular basis. Close attention and focus is given to the forecast target dates for completion and these groups oversee, if necessary, further risk assessment. This process may result in reprioritisation and reallocation of resources.

### 6.5 Managing Residual Fire Risk

To ensure readiness for the fire season Essential Energy is committed to;

- a) Actioning asset related tasks identified by PSBI inspections before the FDP.
- b) Ensuring asset related tasks in Priority 1 (P1) zones reported in the AMS system, from other inspection processes, are actioned within allocated timeframes, before or during the FDP. This includes Cat 1-3 classified tasks.
- c) Actioning vegetation tasks identified by pre-summer inspections before the fire declaration period.
- d) Ensuring vegetation span clearances in P1 zones reported in the AMS/VIMs system from other inspection processes, are rectified within allocated timeframes before or during the FDP. This includes A1-4 classified tasks.

It is acknowledged that cases may arise where some portion of works identified above cannot be completed within expected timeframes due to circumstances beyond Essential Energy's reasonable control. For example, flooding in parts of NSW prevented access to many inland assets in the months leading up to the FDP in 2016.

In such cases, Essential Energy engages a risk management process which includes (i) close monitoring of overdue works in high risk locations (ii) re-setting priorities and (iii) resource planning which allows for re-prioritisation and mobilisation to affected areas as soon as possible. This is undertaken through regular meetings of the senior leadership group through representations on the BRAP, AP&A group, and ENIMC. The risk position is highlighted through these groups to the Executive Leadership Team and Board.

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## **7 OPERATIONAL REQUIREMENTS FOR TOTAL FIRE BAN AND FIRE EMERGENCIES**

### **7.1 Special procedures and precautions**

Essential Energy has developed the following work practices to ensure procedures and precautions are considered by employees and accredited service providers, to minimise the risk of bushfire ignition by network assets or work practices during conditions of extreme fire danger.

- > During periods of Total Fire Ban power supply restoration is carried out in fire prone areas after a line patrol has been undertaken in accordance with the System Operations: Manual Reclosing of Overhead Lines (CEOP2062).
- > A risk assessment approach is used to determine whether to disable the automatic line reclosing function in accordance with the industry guideline *ISSC33-Guideline for network configuration during high bushfire risk days* and consideration of research carried out by the *Powerline Bushfire Safety Taskforce*.
- > The inclusion of sensitive earth fault protection on rural feeders. This type of protection operates at very low levels of fault current (i.e. a tree branch leaning against a line but still in contact with the ground).
- > Field work practices covering the use of plant, tools, and equipment during periods of high fire danger and Total Fire Ban conditions is defined in procedure CEOP1000.13 Bushfire prevention and survival.
- > Extreme heatwave weather may cause the cancellation of planned work programs to ensure the health and safety of employees. This allows employees to be available and on standby for rapid emergency response, which may be required during extreme conditions. The speedy rectification of supply loss reduces potential heat related health impacts to the public.

Several critical installations are connected to Essential Energy's network that have priority during power restoration efforts. These include:

- > hospitals
- > premises with life support systems, including aged-care and domestic
- > water supply pumping stations and boosters
- > sewerage pumping stations and boosters
- > communication facilities.

Listings and locations of such sites are kept in operational control rooms and reviewed annually. This information changes frequently and Essential Energy relies on customers or agencies for such information.

Essential Energy also maintains incident management manuals and policies for emergencies such as wildfire events. These include:

- > CEOP2137: Electricity Networks Escalation & Recovery Plan
- > CEOP2143: System: Load Shed and System Restart Overarching.

### **7.2 Emergency cutting**

Emergency tree cutting works may be required on days of Total Fire Ban to ensure the safety and reliability of the network. Such activities can be undertaken provided:

- > staff performing the work have ready access to firefighting equipment to extinguish any potential ignitions and
- > all reasonable steps are taken to prevent the escape of fire, sparks, incandescent or burning material from the activity undertaken.

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### 7.3 Communication and liaison actions

Essential Energy has a working relationship with relevant emergency agencies through participation in the Energy & Utility Services Plan (EUSPlan) and membership of the *District Bushfire Management Committees*.

During the lead, up to the fire danger period and after the declaration, Essential Energy's bushfire preparedness is monitored to manage any associated risks.

Essential Energy also liaises with Queensland authorities regarding network assets in that state.

#### Total Fire Ban day notifications

Essential Energy uses various communication tools to ensure employees are aware of forecast adverse weather conditions and/or a declared day of Total Fire Ban. These include:

- > listening to regional ABC radio and local radio stations
- > accessing the following web sites:
  - for NSW:
  - for Queensland:
- > 2-way radio broadcasts
- > observing signage erected at Depots
- > mobile phone SMS messages sent by the Operations centre
- > internal email notifications.

Essential Energy managers and supervisors can monitor existing fire events via Essential Energy's applications linked to RFS feeds.

### 7.4 Emergency asset maintenance and replacement

Emergency asset maintenance or replacement is undertaken after an on-site hazard identification and risk assessment and control (HIRAC) process has been carried out. Tasks identified as emergency or urgent in nature are rectified either immediately or within a very short timeframe reflecting the risk they pose.

### 7.5 Disconnection actions

Essential Energy does not normally disconnect electrical supply during times of bushfire unless it is considered necessary or it is directed to, by emergency agencies, for safety reasons.



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### 8 FIRE START INVESTIGATION AND ANALYSIS

Essential Energy reviews equipment types and construction methods known in their operation or design to have bushfire ignition potential, and has introduced mitigation strategies in relation to their use.

Essential Energy uses two systems for incident or failure analysis – the TotalSAFE incident reporting system and the Outage Management System. Data is collated regarding the type of network event that has occurred and causal information. Analysis of these systems is done periodically and reported through the Bushfire Mitigation Working Group to the Bushfire Assurance Panel.

The process for Essential Energy employees reporting specifically of fire events related to the network assets begins with a TotalSAFE log, and includes an integrated electronic field report (Network Fire Report).

The purpose of this document is to report all fires attended by Essential Energy employees where Essential Energy assets have been damaged and/or are the alleged cause of ignition.

Once the incident report has been created and the responsible officer assigned for investigation, it is automatically sent via email to the assigned officer and when required, to Regional Management, Infrastructure Strategy and Essential Energy's Risk & Insurance business units.

The type of information gathered includes:

- > incident details including background and locality information
- > investigation/comments
- > cause(s) of the incident and network related information.

And if required:

- > corrective action proposed
- > preventative action proposed.

A responsible officer/manager may be assigned to implement the proposed action after which, the incident report is signed off by the Approver.

Actions that are assigned but not implemented by the due date, are automatically escalated to the next level of management. They will continue to be escalated until the work is completed or until it reaches the Chief Executive Officer.

The TotalSAFE database allows reports, digital photographs, and other relevant information to be attached, with a unique number assigned to it and a link to the incident details.

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## **9 PUBLIC SAFETY AWARENESS**

Essential Energy provides information to the public regarding bushfire mitigation efforts. This includes:

- > vegetation clearances and risks relating to trees in close proximity to lines and planting of unsuitable species
- > providing web based copies of the Bushfire Mitigation & Vegetation Management Plans
- > bushfire safety messages
- > information relating to pre-summer Aerial Patrol activities
- > private lines responsibilities.

Essential Energy has developed a bushfire awareness campaign to inform the community of fire hazards associated with overhead power lines and vegetation. The aim of the campaign is to heighten public awareness of hazards prior to and during the high fire danger period.

The bush fire awareness campaign forms part of Essential Energy's Network Management Plan Chapter 3: Public Electrical Safety Awareness Plan (CEOP8005). The purpose of which is to raise the public awareness of the hazards associated with electricity networks and in particular, the fire ignition hazards associated with overhead power lines.

The Plan provides details of strategies used to raise public awareness of the numerous hazards that result from the interaction of people and electricity supply network assets - and to provide simple and effective ways to minimise possible risk exposure.

Essential Energy has also developed a Vegetation Management Plan which aims to develop increased customer awareness of safety in relation to the planting and control of vegetation near power lines.

Essential Energy's awareness program includes:

- > television/radio advertisements
- > social media
- > planting guidelines
- > posters relating to vegetation management
- > newspaper articles and press releases
- > liaison with landowners/occupiers, state government bodies, Bushfire Management Committees, and community based organisations
- > unclassified information available on Essential Energy's Website
- > defective private lines, direct customer contact
- > direct customer contact.

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## **10 PLAN PERFORMANCE**

Essential Energy uses a Dashboard system for corporate reporting at a regional level and above.

The Dashboards Key Performance Indicators (KPI's) include measuring activities associated with bushfire mitigation strategies such as line maintenance, vegetation management, and inspections. Components of the Dashboard are:

- > The Strategy Map which translates Essential Energy's strategy into summarised objectives
- > Objectives are translated into measures/KPI's that drive behaviour and monitor performance
- > Targets are set for each measure to help reach objectives and stretch performance to new levels
- > Initiatives are undertaken to drive performance and meet targets and objectives.
- > Targets for each KPI are reported monthly and the results are indicated on the corporate Dashboard reports to divisional business units.

A range of reporting systems are available including PowerOn Fusion, TotalSAFE, Cognos, PeopleSoft and the asset management system (WASP), and are utilised by the responsible Managers. These provide reports on activities relating to bushfire mitigation and prevention activities such as maintenance, inspections, and incidents.

Fire starts are reported in the TotalSAFE Incident database. These statistics assist in informing the business about its bushfire mitigation plan effectiveness.

### **10.1 Plan review and audit**

Essential Energy's Bush Fire Risk Management Plan is reviewed on a periodic cycle as set in the policy document library (currently set at 2 yearly intervals). A review may be triggered at any time as determined by business needs and obligations or due to feedback from audit processes.

The Plan is subject to internal audit by Essential Energy's internal audit department from time to time and audited externally by regulatory agencies (IPART).

### **10.2 Reporting**

An *Annual Network Performance Report* is submitted to the office of IPART and includes information on bushfire starts, maintenance, reliability, and safety aspects of the operation of Essential Energy's transmission and distribution systems.

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## **11 LGA & FIRE AGENCIES RELATIONSHIPS**

Essential Energy liaises with, consults, and provides access to network assets when requested by the Director-General, fire agencies or other relevant state or local government emergency agencies regarding bushfire related issues. **Attachment A1** indicates the statutory relationships.

Where requested, Essential Energy will:

- > provide representation on NSW Bush Fire Management Committees. A full listing of the committee structure in NSW is attached - **Refer to Attachment B2**
- > participate in local and regional emergency plans, their preparation and any operative exercises or testing of such plans where requested to do so
- > provide liaison officers for Fire Control Management, Incident Control Centres, or the State Emergency Operations Centre when directed
- > provide representation on Local or District Emergency Management Committees across the state.

Essential Energy takes into consideration fire weather warnings reported by Rural Fire Services which are based on the NSW RFS Fire Areas - **Refer to Attachment B3**.

Essential Energy monitors fire weather and danger ratings via the Bureau of Meteorology (BoM) geographical gridded weather mapping services.

Rural Fire Services provide statistical fire event information to Essential Energy as requested. This information forms part of Essential Energy's analysis of fire occurrence where network assets may be involved.

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## 12 MANAGEMENT STRUCTURES & TRAINING

Essential Energy has in place structured management teams with responsibilities for various components of the Plan.

These include responsibility allocations relating to fire mitigation as follows:

### GM Asset Management

- > Network Performance and Risk Management, Maintenance & refurbishment management, Fire mitigation plan development, preparation & submission, License & Regulatory conditions, Network planning for growth and replacement, Asset Management Systems, and Standards

### Network Services

- > Vegetation Management, Asset inspection, Works Management, Contract supervision and management
- > Regional Management – Line maintenance (asset repair); fault & emergency response, stakeholder liaison, works coordination, line crew management. Design services, work scheduling, logistics supply

### Finance and risk

- > Corporate risk strategy, insurance, investment funds, and budget allocations.

The Bushfire Mitigation Plan and related policies are the responsibility of the GM Asset Management, whilst the responsibility for operational implementation rests with the Network Services management team. **Refer to attachment A.**

### 12.1 Field based resources

**Depot Senior Resource / Resource / Crew Supervisors** – are responsible for local field based overhead and underground line construction and maintenance crews and ensuring asset defects are attended to.

**Asset Operations Coordinators and Asset Inspectors** – are responsible for ground line testing, assessing, treatment of poles, overhead visual inspections of pole tops and lines and reporting on the condition of Essential Energy's transmission and distribution network. Asset Inspectors are also responsible for minor on-site defect rectification and data capture of asset details.

**Senior Program Supervisors, Senior Vegetation Officers and Vegetation officers** – are responsible for issues regarding power line vegetation control within an assigned regional area. This includes overseeing and auditing vegetation control activities such as customer consent and negotiations, contract supervision, identification of hazardous trees, maintaining vegetation clearances, environmental management of vegetation near lines and auditing clearances.

**Contracted resources** are also employed for general **tree clearing** activities and for **annual aerial inspection**. Aerial inspection is conducted prior to the fire declaration period and aims to identify damage to the network or vegetation encroachments that may have occurred between routine ground inspections by Asset Inspectors. This also provides an audit of the quality of the contract clearing works in rural zones.

### 12.2 Training

Essential Energy employees receive training and advice relating to bushfire safety. This includes:

- emergency management
- use of firefighting equipment
- An accredited Bushfire Awareness course run by the NSW Rural Fire Service including refresher training on a three-year cycle. Modules include:
  -

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- pre-summer advice and reminders in regard to bushfire mitigation policy

### 12.2.1 Asset inspection training & competencies

Asset Inspectors are required to meet the requirements of CEOP2371 Training & Authorisation: Asset Inspectors, which includes compliance and competency audits and refresher training requirements.

### 12.2.2 Vegetation training & competencies

Specialised training requirements apply to all contracted vegetation management crew members engaged to work for Essential Energy in regard to vegetation clearing activities.

These requirements are specified in the vegetation management plan training matrix and form part of the employment contract.

Essential Energy Vegetation Officers are required to meet the qualification and experience standards outlined in the position description (CBPD 0050 2010) and preference is given to candidates with arborist qualifications.



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### 13 POLICY REFERENCES

#### 13.1 General

The Bushfire Risk Management Plan is supported by various corporate policies and standards which are located in Essential Energy's electronic Policy Library Database which is accessible to all employees and to accredited service providers or contractors.

Essential Energy is required to operate under company and industry codes and standards. The plan contains references to these policies, guidelines, codes and standards. The governing regulations include:

- > Electricity Supply (Safety and Network) Regulation 2014 – for NSW networks
- > Electrical Safety Regulation 2013 – for Queensland networks.

The following referenced documentation forms a key part of the framework to achieve the regulatory objectives in relation to the plan at both corporate and operational levels.

#### 13.2 Safety & Risk Management – applicable company policy and procedures

##### 13.2.1 CEOM8047 – Electricity Network Safety Management System Plan (ENSMS)

The objective of Essential Energy's *Electricity Network Safety Management System Plan* is to establish a framework that supports the provision of safe, reliable and sustainable electricity supplies including protection of people, property and the environment in accordance with the regulation and Clause 4.2 of AS 5577.

The ENSMS plan specifically refers to the Bushfire Risk Management Plan for management of bushfire risk.

##### 13.2.2 CEOP8004 – Customer Installation Safety Plan

The purpose of the Customer Installation Safety Plan is to ensure the provision of safe electrical installations for connection to Essential Energy's network.

##### 13.2.3 CEOP8005 – Public Electrical Safety Awareness Plan

This plan has been prepared in accordance with the NSW Electricity Supply (Safety and Network Management) Regulation 2014 and details Essential Energy's strategies for promoting customer awareness of energy network safety.

##### 13.2.4 CEOP8022 – Bushfire Risk Management Plan

The Bushfire Risk Management Plan aims to identify and mitigate potential bushfire risks – specifically those that relate to the provision of electricity supplies across Essential Energy's network area.

##### 13.2.5 CEOP2111 – Risk: Corporate Risk Management Procedure

The Corporate Risk Management Procedure provides a structured approach to the identification, analysis, evaluation and treatment of risks associated with aspects of Essential Energy's distribution network in a commercial environment. This provides a framework for strategic and operational risk, with bushfire ignition identified as Essential Energy's number one operational risk.

##### 13.2.6 CEOP2137 - Electricity Networks Escalation and Recovery Plan

The purpose of this procedure is to:

- > illustrate the relationship between this procedure and other incident management documents, e.g. for crisis management
- > provide a framework for escalation of incidents by System Operations
- > articulate the roles and responsibilities of the various response work groups
- > articulate the roles and responsibilities for major incident coordination.

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### 13.2.7 CEOP2223 - Major Issues: Management

This document guides Essential Energy's Crisis Management and Recovery (CMR) procedure and provides for:

- > the Chief Executive Officer to be responsible for invoking the CMR procedure in consultation with the Chairperson, if possible
- > specialist crisis management roles within Essential Energy
- > training and crisis response exercises
- > identification of stakeholders and management of stakeholder interests
- > divisional plans for crisis management
- > appropriate management structures for a range of crises circumstances
- > responsibilities for efficient recovery after the crisis.

### 13.2.8 CECM1000.77 – HSE Manual: Flora & Fauna

This manual outlines the actions Essential Energy will take to manage the protection of flora and fauna within the framework of its operational requirements.

### 13.2.9 CECM1000.13 – HSE Manual: Bushfire Prevention & Survival

This manual provides guidance for work activity considerations in bushfire prone areas and days of high fire danger. It also provides guidance for employees regarding emergency fire procedures.

### 13.2.10 CEOP2062 – System Operations: Manual Reclosing of Overhead lines

This document sets out the steps to be taken by Essential Energy's operational personnel for the manual reclosing of power lines and provides advice specifically relating to days of total fire ban.

## 13.3 Asset Management – applicable company codes

### 13.3.1 CEOP8018 – Asset Management

The Asset Management Plan links Essential Energy's strategic direction and operational services with annual budgets and forecasts for capital, operating and maintenance expenditure over the planning period.

The plan provides an overview of Essential Energy's network development and provides a high level description of the systematic asset management approach undertaken by Essential Energy. Furthermore, it details the business processes used to ensure resources are aligned with business objectives and explains how the various processes link together to deliver high quality, reliable and safe electricity network services at the lowest possible price.

### 13.3.2 CEOM7097 – Overhead Design Manual

This document outlines the basic requirements for the design of all overhead distribution power lines within Essential Energy's network area to ensure a standardised network.

It provides construction requirements for bushfire risk areas including the type of conductors suitable for fire prone areas.

These design requirements apply to new works associated with customer connections (i.e. contestable works) and augmentation or refurbishment required by Essential Energy.

### 13.3.3 CEOM7099 – Overhead Construction Manual Index

This document details construction methods to be used within Essential Energy's network area.

The manual is to be used by Essential Energy employees, Accredited Service Providers, contractors, and other personnel engaged by Essential Energy in the construction of Essential Energy's overhead network.

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### 13.3.4 CEOP2446 – Maintenance Strategy – Pole and Line Inspection

This strategy defines the processes associated with the inspection, assessment, and auditing of the companies pole population, overhead lines, and above ground portions of the underground network.

### 13.3.5 CEOM7005 - Asset Inspection Manual

This manual documents Essential Energy's criteria for the inspection and assessment of Essential Energy's overhead transmission and distribution network including the above ground components of underground distribution systems.

This criterion is documented in accordance with CEOP2446 and all relevant Statutory and Regulatory obligations.

This manual contains the activities associated with the asset inspection and assessment process, including:

- > inspection and assessment of network overhead poles and structures
- > visual inspection of overhead lines
- > wood pole treatments
- > vegetation clearances
- > termite identification and treatment
- > distribution substation earth integrity checks

### 13.3.6 CEOM7005.08 – Operational Manual: Aerial Surveillance: Overhead Electricity Networks Including Fault & Emergency Patrols

This manual documents Essential Energy's criteria for aerial inspection of overhead networks. Including criteria associated with:

- > aerial surveillance of overhead lines including fault and emergency patrols
- > annual patrol of high risk bush fire prone areas.

### 13.3.7 CEOP8008 – Vegetation Management Plan

Essential Energy recognises the amenity value of trees and other vegetation and their importance to our environment. Vegetation must however, be managed near power lines to maintain safety for individuals and the environment while maintaining the quality and reliability of the electricity supply. This is a challenging task to achieve while maintaining safety requirements, protecting or minimising harm to the environment, preventing damage to property and to satisfy all concerned.

### 13.3.8 CEOP8007 – Mains & Distribution Field Equipment Maintenance

This procedural guideline states Essential Energy's mains and distribution field equipment maintenance management strategy to provide the basis for development of maintenance procedures for each equipment category.

### 13.3.9 CEOP8009 – Distribution Substation and Switchgear Maintenance

The safe and dependable operation of an electricity distribution network hinges on the reliability of equipment such as distribution substations and switchgear and the establishment and maintenance of low impedance earthing systems to ensure protective devices operate properly under fault conditions.

The minimum standards prescribed in this document shall apply to all distribution substation and switchgear apparatus installed on the distribution network.

### 13.3.10 CEOP2245 – Asset Refurbishment Strategy Zone Substations

This document establishes policy and overall strategies for asset management of substation plant especially with regards to replacement or refurbishment considerations.

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### 13.3.11 CEOP8011 – Sub-Transmission & Zone Substation: Maintenance

This procedure documents Essential Energy's network maintenance strategy and technical maintenance plans for each asset category within Sub-Transmission and Zone Substations.

### 13.3.12 CEOP8042 – Networks: Asset Identification & Operational Labels

The purpose of this document is to provide a standard format and process for labelling of Essential Energy assets for both operational and maintenance purposes. This covers the requirements for labelling of private poles.

### 13.3.13 CEOP8019 – Capital Contributions Policy

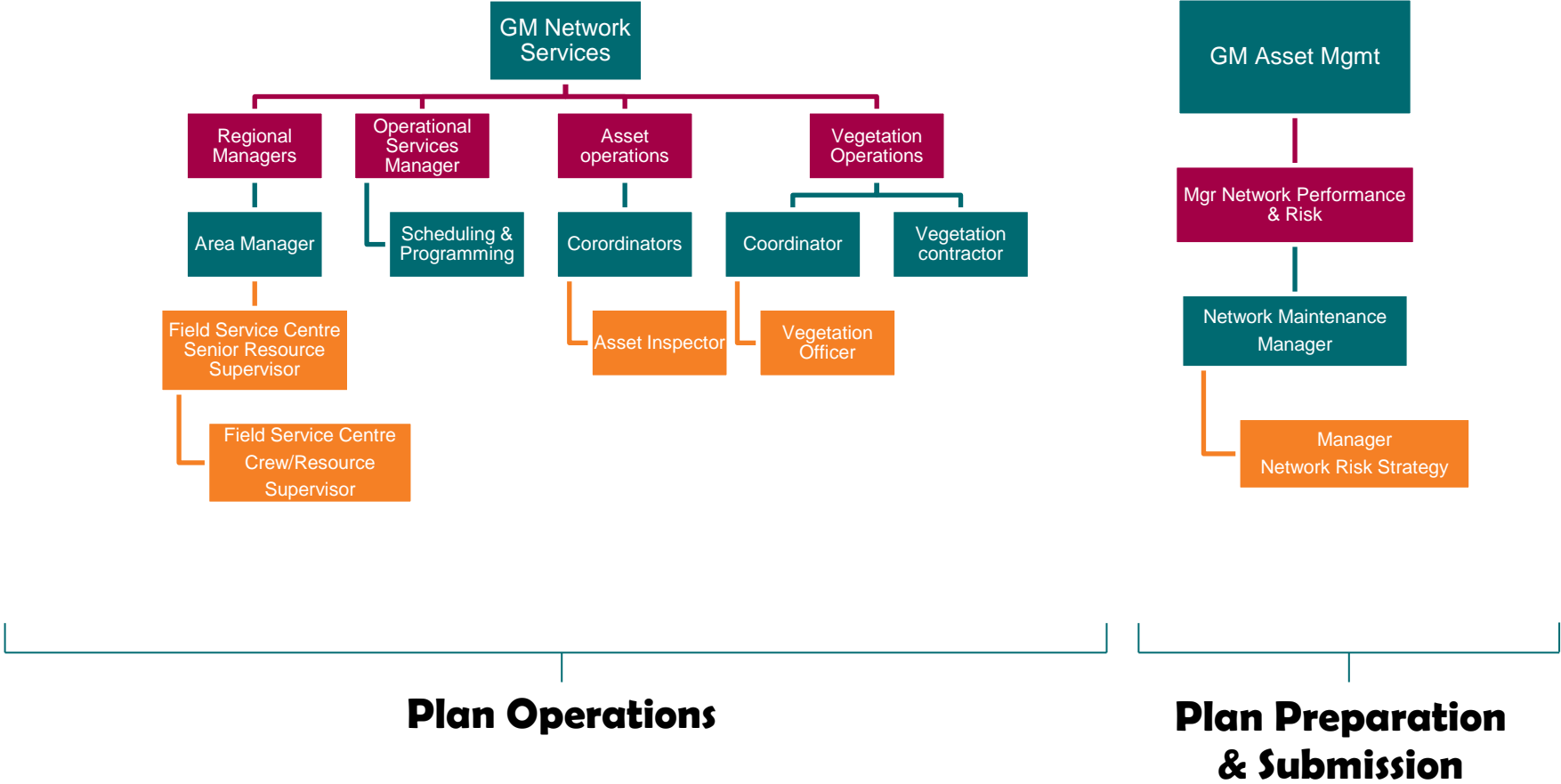
This document provides guidelines for determining contributions from customers towards the cost of capital works associated with the provision, installation, and upgrade of electricity network assets necessary to connect or increase supply to a new or existing Essential Energy network customer.

The policy contains elements relating to the fire ignition reduction strategy in the form of guidelines for conversion of overhead lines to underground and underground incentives via pole rebates to customers.

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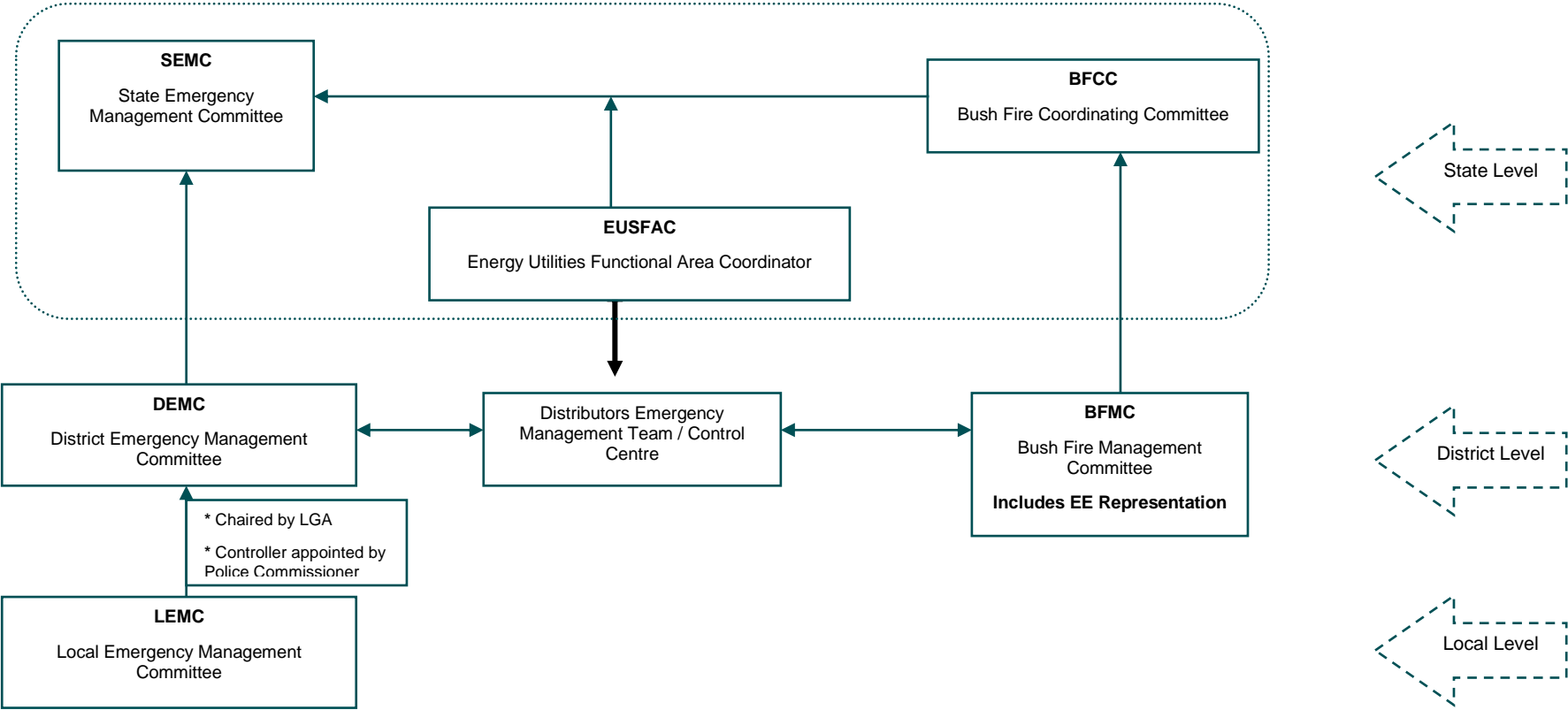
14 ATTACHMENTS

14.1 Attachment A - Organisation structure with plan responsibility



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14.2 Attachment A1 – Agency Relationships (State & District Emergency Hierarchy)



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**14.3 Attachment A2 – Bush fire management Committees (RFS Jurisdictions) & LGA's**

LGA	Bush Fire Management Committees	LGA	Bush Fire Management Committees
Bankstown, Hurstville	Bankstown/Hurstville	Lithgow	Lithgow
Bourke, Brewarrina	Barwon/Darling	Gunnedah, Liverpool Plains, Upper Hunter	Liverpool Range
The Hills Shire	Baulkham Hills	Lord Howe Island	Lord Howe
Bega Valley Shire	Bega Valley	Dungog, Port Stephens	Lower Hunter
Bland, Temora	Bland-Temora	Kempsey, Nambucca	Lower North Coast
Blue Mountains City	Blue Mountains	Balranald, Wentworth	Lower Western Zone
Bombala	Bombala	Camden, Campbelltown, Liverpool	Macarthur
Blayney, Cabonne, Cowra, Orange	Canobolas Zone	Manly, Mosman, North Sydney	Manly-Mosman-North Sydney
Carrathool Shire	Carrathool	Forbes, Lachlan, Parkes, Weddin	Mid Lachlan Valley
Gilgandra, Warrumbungle	Castlereagh	Conargo, Deniliquin, Jerilderie, Murray, Wakool	Mid Murray Zone
Central Darling	Central Darling	Bellingen, Coffs Harbour	Mid North Coast
Bathurst Regional, Oberon	Chifley	Griffith, Leeton, Murrumbidgee, Narrandera	Murrumbidgee Irrigation Area
Clarence Valley	Clarence Valley	Muswellbrook Shire	Muswellbrook
Cobar Shire	Cobar	Moree Plains, Narrabri	Narrabri/Moree
Corowa, Berrigan	Corowa, Berrigan	Armidale, Dumaresq, Guyra, Uralla, Walcha	New England
Mid Western Regional	Cudgegong	Newcastle City	Newcastle
Blacktown, Fairfield, Penrith	Cumberland Zone	Bogan, Coonamble, Walgett, Warren	North West
Eurobodalla Shire	Eurobodalla	Kyogle, Lismore, Richmond Valley	Northern Rivers
Ballina, Byron, Tweed	Far North Coast	Glen Innes, Severn, Inverell, Tenterfield	Northern Tablelands
Gloucester Shire	Gloucester	Dubbo, Narromine, Wellington	Orana
Gosford City	Gosford	Coolamon, Junee, Lockhart, Urana, Wagga Wagga	Riverina

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<b>LGA</b>	<b>Bush Fire Management Committees</b>		<b>LGA</b>	<b>Bush Fire Management Committees</b>
Great Lakes	Great Lakes		Gundagai, Tumbarumba, Tumut	Riverina Highlands
Greater Taree City	Greater Taree		Shoalhaven City	Shoalhaven
Gwydir	Gwydir		Singleton Shire	Singleton
Hastings	Hastings		Cooma-Monaro, Snowy River	Snowy-Monaro
Hawkesbury City	Hawkesbury		Boorowa, Cootamundra, Harden, Young	South West Slopes Zone
Hay Shire	Hay		Goulburn-Mulwaree, Upper Lachlan, Yass Valley	Southern Tablelands
Hornsby, Ku-ring-gai	Hornsby/Ku-ring-gai		Sutherland	Sutherland
Albury, Greater Hume Shire	Hume Zone		Tamworth Regional	Tamworth
Cessnock, Maitland	Hunter		Pittwater, Warringah	Warringah/Pittwater
Hunters Hill, Lane Cove, Ryde, Willoughby	Hunters Hill, Lane Cove, Ryde, Willoughby		Unincorporated Area	West Darling
Kiama, Shellharbour, Wollongong	Illawarra		Wingecarribee Shire	Wingecarribee
Palerang, Queanbeyan	Lake George		Wollondilly Shire	Wollondilly
Lake Macquarie City	Lake Macquarie		Wyong Shire	Wyong

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14.4 Attachment A3 – NSW Fire Areas (for fire weather warnings & declarations)

# NSW FIRE AREAS + LOCAL GOVERNMENT AREAS



**1. FAR NORTH COAST**

- Ballina
- Byron
- Clarence Valley
- Kyogle
- Lismore
- Richmond Valley
- Tweed

**2. NORTH COAST**

- Bellingen
- Coffs Harbour
- Gloucester
- Great Lakes
- Greater Taree
- Hastings
- Kempsey
- Nambucca

**3. GREATER HUNTER**

- Cessnock
- Dungog
- Lake Macquarie
- Maitland
- Muswellbrook
- Newcastle
- Port Stephens
- Singleton
- Upper Hunter

**4. GREATER SYDNEY REGION**

- All Sydney Metropolitan Councils
- Plus Gosford, Blue Mountains, Hawkesbury and Wyong

**5. ILLAWARRA/SHOALHAVEN**

- Kiama
- Shellharbour
- Shoalhaven
- Wingecarribee
- Wollondilly
- Wollongong

**6. FAR SOUTH COAST**

- Bega Valley
- Eurobodalla

**7. MONARO ALPINE**

- Bombala
- Cooma Monaro
- Snowy River

**8. ACT**

- Australian Capital Territory

**9. SOUTHERN RANGES**

- Eastern Capital Regional Council
- Greater Argyle
- Greater Queanbeyan
- Upper Lachian
- Yass Valley

**10. CENTRAL RANGES**

- Bathurst Regional
- Blayney
- Great Lakes
- Cabonne
- Cowra
- Lithgow
- Mid Western Regional
- Kempsey
- Nambucca
- Orange
- Wellington

**11. NEW ENGLAND**

- Armidale Dumaresq
- Glen Innes
- Guyra
- Severn
- Tenterfield
- Singleton
- Walcha

**12. NORTHERN SLOPES**

- Gunnedah
- Gwydir
- Inverell
- Liverpool Plains
- Tamworth Regional

**13. NORTH WESTERN**

- Coolah
- Coonabarabran
- Moree Plains
- Narrabri
- Walgett

**14. UPPER CENTRAL WEST PLAINS**

- Bogan
- Coonamble
- Gilgandra
- Warren

**15. LOWER CENTRAL WEST PLAINS**

- Bland
- Dubbo

- Forbes
- Lachlan
- Narramine
- Parkes
- Temora
- Weddin

**16. SOUTHERN SLOPES**

- Boorowa
- Cootamundra
- Gundagai
- Harden
- Tumbarumba
- Tumut
- Young

**17. EASTERN RIVERINA**

- Albury
- Coolamon
- Greater Hume
- Junee
- Lockhart
- Wagga Wagga

**18. SOUTHERN RIVERINA**

- Berrigan
- Conargo
- Corowa
- Deniliquin
- Jerilderie
- Murray
- Urana
- Wakool

**19. NORTHERN RIVERINA**

- Carrathool
- Griffith
- Hay
- Leeton
- Murrumbidgee
- Narrandera

**20. SOUTH WESTERN**

- Bairanald
- Wentworth

**21. FAR WESTERN**

- Bourke
- Brewarrina
- Broken Hill
- Central Daring
- Cobar
- Unincorporated NSW

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## 15 SUMMARY OF CONTACTS & APPROVAL

### Essential Energy

#### Bushfire Risk Mitigation Plan - contacts

<b>Office Address:</b>	8 Buller St, Port Macquarie, NSW 2444
<b>Telephone:</b>	13 23 91

<b>Person Responsible for Plan Preparation:</b>	Peter Wilson
<b>Position:</b>	Network Maintenance Manager
<b>Office Address:</b>	8 Buller St, Port Macquarie, NSW 2444
<b>Postal Address:</b>	PO Box 5730, Port Macquarie, NSW 2444
<b>Telephone:</b>	(02) 6589 8212

<b>Person(s) Responsible for Plan Implementation:</b>	Chief Executive Officer
<b>Office Address:</b>	8 Buller St, Port Macquarie, NSW 2444
<b>Postal Address:</b>	PO Box 5730, Port Macquarie, NSW 2444
<b>Telephone:</b>	02 6589 8702

<b>Emergency Contact Number for Immediate Action:</b>	24 hour operations desk Queanbeyan Ph:13 20 80 Ph: 02 6122 3006
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<b>Approved:</b>	
	Paul Brazier
	Acting GM Asset Management
<b>Signature:</b>	

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## **16 REFERENCES**

CEOM 8047 Electricity Network Safety Management System Plan  
CECM1000 – HSE Manual Sections  
CECM1000.13 – HSE Manual: Bushfire Prevention & Survival  
CECM1000.77 – HSE Manual: Flora & Fauna  
CEOH4502.11 – How to Manage Complaints  
CEOP2446 – Maintenance Strategy – Pole and Line Inspection  
CEOM7097 – Overhead Design Manual  
CEOM7099 – Overhead Construction Manual  
CEOP2062 – System Operations: Manual Reclosing of Overhead Lines  
CEOP0002.21 – Company procedure – Risk Management  
CEOP2137 – Electrical Networks Escalation and Recovery Plan  
CEOP2223 – Major Issues Management  
CEOP8004 – Customer Installation Safety  
CEOP8005 – Public Electrical Safety Awareness  
CEOP8007 – Mains & Distribution: Field Equipment Maintenance  
CEOP8008 – Vegetation Management Plan  
CEOP8009 – Maintenance Management: Distribution Substation & Switchgear  
CEOP8010 – Electricity Network: Asset Inspection  
CEOP8011 – Sub-Transmission & Zone Substation: Maintenance  
CEOP8018 – Networks: Asset Management Plan  
CEOP8019 – Capital Contributions Policy  
CEOP8047 – Electricity Network Safety Management System Plan  
CEOP8042 – Networks: Asset Identification & Operational Labels

Essential Energy's Asset Management System (WASP)  
Essential Energy's Training Database  
Essential Energy's Policy Library Database  
Essential Energy's TotalSAFE Database  
Essential Energy website [www.essentialenergy.com.au](http://www.essentialenergy.com.au)  
ISSC33 Guideline for network configuration during high bushfire risk days  
NSW Electricity Supply Act 1995  
NSW Electricity Supply (Safety and Network Management) Regulation 2014  
NSW Rural Fires Act 1997

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## 17 REVISIONS

Issue Number	Section	Details of Changes in this Revision
3	All	References updated Changes throughout document
4	All	References updated Minor changes throughout document
5	All	References updated Minor changes throughout document
6	All	Major review considering Black Saturday Fires 2009 in Victoria and changes throughout document to most sections
7	All	References, template & logo change in line with Essential Energy branding.
8	7.1	Additional information added to 2 <sup>nd</sup> dot point in this section – regarding industry guidelines
	16	ISSC Guideline added to references
9	All	Consultation, Feedback and Review added (Sect.1.1 & 1.2) All references to the Victorian franchise areas removed. Essential Energy map updated to 5 region structure (Sect. 3) EE Preference for Underground of new private service lines in rural areas added (Sect. 12). EE structure changes - Executive GM references removed. etc. (attachment 14.1). Training references updated as per reviewer comments (Sect. 13.2).
10	All	Change to template
11	3, 14	Section 1 – Telephone numbers changed to 132391 Section 3 - Network map updated to 4 region model Section 4.2.8 – Deleted, was Recovery Action Plans by region, now covered in Section 4.2.6 Section 4.2.12 – Deleted, was Customer Complaint Handling, now covered in Section 5.14 Section 4.4 – Deleted, Document Management Section 5.2 – Corridor reclamation program reference deleted Section 5.6 – Was Industry research. Technology added Section 5.13 – Phoenix Rapid Fire reference added Section 5.14 – Customer enquiries and complaints reworded Section 7.1 – References to Recovery Action Plans deleted Section 14 - Organisational chart revised. Section 17 – References list revised
12	2.1, Table 1 and minor changes in other places	Document titles and Legislative requirements amended to take account of the remaking of the Regulation - Electricity Supply (Safety and Network) Regulation 2104
13		<b>Several changes to this version to incorporate recommendations from the IPART audit.</b>

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	<p>4.1</p> <p>4.2</p> <p>4.5</p> <p>4.10</p> <p>4.11</p> <p>5.1</p> <p>10.1</p> <p>12 &amp; 13.1</p>	<p><b>Identification of hazardous bushfire areas</b> - Added reference to determination of fire risk locations.</p> <p>Updated to clarify scope of <b>pre-summer aerial inspection</b> activity.</p> <p><b>Private Lines</b> - Updated comments and combined with other section on private lines. Added ESAct Div2A – s53 reference.</p> <p>Added this to explain the <b>BRAP and BRWG functions</b> as preventative instruments.</p> <p>Added this section to explain the reporting functions and the <b>BMI utilisation</b>.</p> <p>Asset condition monitoring (inspections) – work programs: described the pre-summer inspection program as it relates to high fire risk locations.</p> <p>Updated information relating to BMI reporting</p> <p>Updated org structure reference. Including update of Attachment A: Org Responsibility Diagram.</p> <p>Various wording tidy up throughout document and update of Essential Energy Map. Moved section 4 Policy References toward back (now section 13).</p>
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