Waubra Wind Farm
Bushfire Mitigation Plan
2023 - 2024

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Date	06/10/2023	06/10/2023	06/10/2023
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**This document has been verified by the IMS coordinator and meets review and approval requirements.*

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Purpose

Acciona Energia Australia Global Pty Ltd (Acciona Energia) developed this Bushfire Mitigation Plan (BMP) as a part of its overall Operational Environmental Management Plan (OEMP) for the wind farm. It has been prepared in accordance with the Electricity Safety Act 1998 (the Act) and the subordinate Electricity Safety (Bushfire Mitigation) Regulations 2013 version 005, and is complemented by Acciona Energia's Electric Line Clearance Management Plan (ELCMP).

The overall objective of this BMP is to minimise the risk of bushfires as a result of the operation of the Waubra Wind Farm. It includes (but is not limited to) the procedures, standards, codes, and guidelines that Acciona Energia employs to mitigate bushfire risk.

Scope and Overview

This BMP applies to the Waubra Wind Farm.

Acciona Energia Australia Global Pty Ltd (Acciona Energia) operates Pyrenees Wind Energy Developments Pty Ltd the Waubra Wind Farm under a Facilities management agreement. This wind farm is located approximately 35 km northwest of Ballarat, near the town of Waubra, on open agricultural land that is used predominately for grazing and cropping.

The wind farm comprises 128 turbines with a combined power generation capacity of 192 MW. The electrical power generated by the wind turbines is reticulated through underground, 12 kV power cables (approximately 95 km) to five collector substations located at various strategic points around the wind farm. From the collector substations overhead, 66 kV power lines (approximately 19 km) are used to bring the electrical power to a single collector switching station where the wind farm's electrical power is aggregated and finally delivered to AusNet Services adjacent terminal station for connection into their 220 kV transmission line.

An overview plan of the wind farm infrastructure, including the extent of overhead electric lines, is illustrated in Appendix A.

Why Prepare this BMP?

Victoria is one of the most fire-prone areas in the world [1]. As with any electrical installation the operation of the Waubra Wind Farm has the potential to ignite fires. Any ignition of fire within the wind farm has the potential to increase the risk of bushfire. Consequently, mitigation measures need to be developed and put into effect to reduce this risk as far as is reasonably practicable.

While the Regulations focus on "at risk electric lines" Acciona Energia recognises that there is also risk of fire ignition from other electrical assets associated with the Waubra Wind Farm including the equipment within the wind turbines and the collector substations. This BMP therefore exceeds the scope required by the Act and Regulations and addresses the mitigation of fire ignition risk for all wind farm electrical assets.

[1] Country Fire Authority Victoria website http://www.cfa.vic.gov.au .

Definitions

Term	Definition
Acciona Energia	Acciona Energy Australia Global Pty Ltd (ABN 54 600 910 647)
Act	Electricity Safety Act 1998 (version 081, 01-January-2021)
AER	Australian Energy Regulator
BMP	Bushfire Mitigation Plan
Bushfire	A generic term for an unplanned fire which includes grass fires, forest fires and scrub fires. Used interchangeably with “wildfire”.
CFA	Country Fire Authority
ELCMP	Electric Line Clearance Management Plan
ESV	Energy Safe Victoria
ESC	Essential Services Commission Victoria
HSEQ	Health Safety Environment Quality
OEMP	Operational Environmental Management Plan
Regulations	Electricity Safety (Bushfire Mitigation) Regulations 2013 (version 005, 27 June 2020)

Contact Information

Specified Operator

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Responsible Person

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Person Responsible for Carrying Out the BMP

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Secondary Points of Contact

Fall back emergency contact points are as follows:

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Bushfire Mitigation Policy

Acciona Energia adopts a best practice approach to health, safety, and the environment for all its business activities. Acciona Energia is committed to protecting its employees and affected stakeholders (including contractors, visitors, and the public) by minimising and, where possible, eliminating health, safety, and environmental risks [2].

Fire ignition and any resultant fire (structure fire or bushfire) is a significant threat to life, property, and the environment. Acciona Energia is committed to the mitigation and, where possible, elimination of fire ignition risks arising from our operations.

Acciona Energia is committed to the effective implementation of this BMP and its associated ELCMP to eliminate fire ignition risk as far as is reasonably practicable.

The implementation of this BMP and its associated ELCMP will be achieved through a variety of procedures, inspections, and regular reviews. It is the responsibility of the Director - Operations to ensure that the objectives of this plan are achieved in a timely and efficient manner.

Objectives of the BMP

The primary objective of Acciona Energia's BMP is to eliminate fire ignition risks in all our operations through the:

- Elimination of ignition sources, and
- Maintenance of the necessary separation between potential ignition sources and any flammable material.

Specifically, the BMP provides a management framework for the Waubra Wind Farm for:

- Reducing the risk of fires and power interruptions
- Protecting the health and safety of the local community
- Ensuring safe clearances are achieved and maintained
- Minimising the environmental impacts of our mitigation activities
- The minimum vegetation line clearances will be meet, as per the Code of Practise for Electric Line Clearances, and
- Acciona Energia is committed to safe, secure, and sound operation of its assets.

Description of Waubra Wind Farm

General Description

The Waubra Wind Farm is located in western Victoria, near Waubra approximately 35 km northwest of Ballarat. The area comprises cultivated farmland, predominantly used for grazing and cropping (mostly cereal grains and potatoes). There is little to no forest within the Waubra Wind Farm itself apart from isolated trees and windbreaks but there are large, forested areas in the region at large.

Fire Hazard Rating

[2] Refer to Acciona Energia's Integrated Management System policy

In accordance with Section 80 of the Act the Country Fire Authority (CFA) is responsible for making determinations of Fire Hazard Rating[3]. The CFA has determined that the Fire Hazard Rating of the region is "High"[4]. Consequently, the Waubra Wind Farm is in a "hazardous bushfire risk area" and all overhead power lines are deemed to be "at-risk electric lines".

Infrastructure

The wind farm comprises 128 turbines with a combined power generation capacity of 192 MW. The electrical power generated by the wind turbines is reticulated trough underground, 12 kV power cables (approximately 95 km) to five collector substations located at various strategic points around the wind farm. From the collector substations overhead, 66 kV power lines (approximately 19 km) are used to bring the electrical power to a single collector switching station where the wind farm's electrical power is aggregated and finally delivered to AusNet Services adjacent terminal station for connection into their 220-kV transmission line.

Acciona Energia is cognisant that it is not just our overhead power lines that introduce a fire ignition hazard. This BMP also considers the hazards introduced by our underground power cables, collector substations & collector switching station and the wind turbines themselves.

An overview plan of the wind farm infrastructure, including the extent of overhead electric lines, is illustrated in **Appendix A**.

Wind Turbines

The wind turbines convert the energy in the wind into electrical power. They comprise a rotor and nacelle mounted on tall, tapered steel towers (either 72 m or 80 m tall).

The electrical generator itself is located within the nacelle at the top of the tower and operates at 12 kV. Other control and utility circuits also operate within the nacelle but at lower voltages. A large mechanical gearbox and hydraulic circuits with their associated hydraulic fluids and lubricating greases and oils are also located within the nacelle.

A transformer is used to step-down the 12 kV to the lower voltages used in the control and utility circuits. This transformer and the wind turbine's high voltage switchgear are located within the tower (near ground level). The transformers are air cooled and the high voltage switchgear is fused and insulated with SF6 gas.

The steel towers are approximately 5 m in diameter at ground level, thick walled (> 20 mm) and solidly bonded to a comprehensive earth-grid that is buried in the ground around the wind turbine and its foundation.

Underground Power Cables

The underground power cables collect the electrical power from small groups of wind turbines (typically 5 to 7 wind turbines in each group). These underground power cables operate at 12 kV – the same voltage as the wind turbines. Each group of wind turbines has its own electrical circuit/cable which is switched by dedicated gas insulated circuit breakers housed within the switching room of the collector substation.

[3] Refer to Appendix B for an explanation of Fire Hazard Ratings.
[4] Fire Hazard Ratings for the Electricity Safety Act 1998 - version 077 January 2020

The underground power cables are buried in trenches at a depth of approximately 0.8 m. Protective plates and warning tapes are laid at various depths to protect the cable and warn diggers of the presence of the cable. The cables themselves are heavily insulated, armoured and shielded.

There is a total of approximately 95 km of underground power cables within the Waubra Wind Farm.

The likelihood of fire ignition from the underground power cables is close to zero: only a mechanical break into a live conductor (e.g., when digging) could act as a fire ignition source.

Collector Substations & Collector Switching Station

The collector substations collect the underground cables from groups of wind turbines to a single point so that it can be stepped up to a higher voltage (66 kV) and then connected to the collector switching station via overhead power lines. There are five collector substations spread across the wind farm. The groups of wind turbines that feed into each collector substation form a "section" of the wind farm (i.e., there are 5 sections).

The collector switching station brings all the overhead lines from all five sections of the wind farm together at a single point. This allows the entire wind farm to be connected to Transmission Network via AusNet Services Terminal Station from a single point and acts as the "master switch" of the whole wind farm. There is only one collector switching station on the wind farm. It is co-located with Collector Substation 3 and is immediately adjacent to SP AusNet's Terminal Station.

The collector substations consist of a control building and a transformer yard. The 12 kV circuit breakers for each underground cable are housed within the control building. The transformer, circuit breakers and other protection equipment are all located within the transformer yard. The control equipment for all the equipment within the collector substation is located within the control building.

The Collector Switching Station consists only of a switching yard which is adjacent to the transformer yard of Collector Substation 3. The circuit breakers, isolators and other protection equipment are all located within the switching yard. The control equipment for all the Collector Switching Station equipment is co-located in the control building of Collector Substation 3.

The transformers are oil cooled and fully bunded to stop the spreading of oil or fire. Ignition of fire from the transformers is possible but unlikely to spread. Control equipment are fully enclosed, and the likelihood of fire ignition is minimal.

Overhead Power Lines

Acciona Energia operates approximately 19 km of overhead power lines as a part of the Waubra Wind Farm. All the overhead power lines operate at 66 kV either as single circuit or double circuit.

All overhead power lines are mounted on CCA[5]-treated, timber poles. The poles are approximately 14 m high for single circuit lines and 18 m high for double circuit lines. The conductors are mounted on insulators which are in turn mounted on galvanized steel cross- arms that are attached to the top of the poles. A fibre optic cable is mounted on a catenary approximately 4 m below the conductors and an earth wire is mounted a further 0.6 m below this. The clearance to ground level underneath the earth wire is variable but generally 6 - 7½ m.

[5] CCA = Chromated Copper Arsenate (CCA) is a wood preservative routinely used to protect it against damage from bacteria, fungus and insects.

The overhead power lines all use bare Iodine [6] as a conductor.

Acciona Energia does not operate any pole mounted switchgear or transformers as a part of the Waubra Wind Farm.

All Waubra Wind Farm overhead lines are managed by the ELCMP.

It should be noted that this BMP addresses only the 66 kV overhead power lines that are owned by and under the control of Acciona Energia. Acciona Energia is not responsible for the 220 kV transmission line and terminal station (part of AusNet Services transmission network) nor is it responsible for the numerous overhead power lines that provide supplies to the various retail customers in the local area (part of Powercor Australia's distribution network). The overhead lines that are part of the transmission and distribution networks are the subject of separate Bushfire Mitigation Plans controlled and implemented by others.

Bushfire Prevention Strategies and Programmes

Risk Management

This BMP and its associated ELCMP, provides specific strategies and programmes for the prevention of bushfires caused by the operation of the Waubra Wind Farm. This section lists the preventative strategies and programmes that Acciona Energia will adopt to mitigate the risk of bushfire. The works required for each strategy are outlined.

Since the wind farm commenced operations in 2009, there have been no fires caused by the wind farm assets (electric lines, substations, turbines), personnel or other work activities across the site.

The strategies and programmes are guided by an overarching health, Safety and Environment risk management Procedure.

Methods for the identification, assessment and control of potential bushfire hazards include:

- Site specific Risk Register,
- Task and plant based risk assessments,
- Active Hazard identification and reporting,
- Emergency control organisation and liaison with Country Fire Authority,
- Environmental Management Plan – monitoring activities

Bushfire risks are managed as per the hierarchy of controls. Where elimination of bushfire risk is not possible, a number of engineering and compliance activities have been implemented and supported by an Internal Inspection program.

Specific bushfire prevention controls are outlined in the following sections.

Energy Safe Victoria has not issued any exemptions to Acciona Energia in relation to these regulations.

[6] Iodine = 7 strands of 4.75mm AAAC 1120 (All Aluminium Alloy Conductor manufactured to AS1531).

General Site Bushfire Risk

Acciona Energia has identified that our "at-risk electric lines" pose a fire ignition hazard resulting from:

- Person(s) and/or equipment encroaching into the "No-Go Zone"
- Vegetation growing into the clearance zone, and
- Failure of a conductor, pole and/or pole attachment hardware (e.g., pole fires caused by insulator failure, live conductors falling to earth etc.).

Other assets of the Waubra Wind Farm present a fire ignition hazard. This includes:

- Person(s) and/or equipment encroaching into the "No-Go Zone" of the Collector Substations
- Vegetation growth within Collector Substations (potentially encroaching on clearance zones)
- Catastrophic failure of the equipment within the Collector Substations (e.g., transformer explosion, circuit breaker explosion etc.)
- flammable chemicals including waste
- Wind turbine fire, and
- Open air operational activities (e.g., vehicle exhausts, welding, grinding and other hot works etc).

Mitigation strategies adopted to fix the problem include:

- Designing Collector Substations, the Collector Switching Station and the wind turbine sites according to Australian Standards to have intrinsic fire mitigation strategies built into them.
- Collector Substations, the Collector Switching Station, O&M building and the wind turbine sites kept clear of flammable substances such as packaging, rubbish, and other work materials..
- Collector Substations, the Collector Switching Station inspected every 6 months and wind turbine sites inspected every 6 months.
- Storage and segregation of chemical products in accordance with Dangerous goods requirements referred to in Dangerous goods and Hazardous Substances procedure.

Wind Turbines

The surrounds of all turbines will be kept clear of flammable substances.

- A two-metre surround for all turbine towers are covered with crushed rock to reduce the growth of vegetation and provide safe step and touch potentials. The reduced growth of vegetation is achieved by annual grass and weed spraying.
- The wind turbines are located on land that is predominantly used for grazing and cropping. The grass for grazing is kept short by the livestock and the cropping tends to be potatoes and cereal grains.
- Each wind turbine is to be inspected every year before the first of November to ensure the crushed rock/gravel area is clear of vegetation and other flammable items (e.g., packaging, rubbish, oil containers, etc).
    - If items posing a fire risk are noted during such an inspection, then arrangements must be made for their removal as soon as is reasonably practicable is reasonably practicable (in this case before the first of December of that calendar year).
- At the completion of any work undertaken in a turbine or tower, personnel are to visually inspect the crushed rock/gravel area and remove any flammable non-plant items (e.g., packaging, rubbish, oil containers, etc).

- If items posing a fire risk are identified during such an inspection, then arrangements must be made for its removal as soon as is reasonably practicable (in this case before the first of December of that calendar year or immediately on declaration of a day of Total Fire Ban).

Underground Power Cables

Access to the area around all underground power cables will be restricted and any works in the vicinity of any cable will be controlled through a permit system.

- All underground cables are accurately surveyed.
- Any work involving excavations is controlled by work permit system and procedures are in place to further control any work within 6.4 m of any underground cable route.

Collector Substation

The transformer yards of all Collector Substations will be kept clear of flammable substances, except during maintenance periods being undertaken by work order permit. An example of this exception is during transformer maintenance works.

- The yards of all Collector Substations are covered with crushed rock and/or bitumen to reduce the growth of vegetation.
- A reduced fuel area, 4 m wide, is maintained around the exterior of perimeter fence of the Collector Substations. This is achieved by annual grass and weed spraying.
- Collector Substation screening vegetation has been planted with enough clearance from overhead line routes and perimeter fences (i.e., not under overhead power lines or able to encroach into the reduced fuel area).
- Conductors are spaced so that they cannot clash.
- Each Collector Substation is inspected 2 times per year to ensure the transformer yard is clear of vegetation and other flammable non-plant items (e.g., packaging, rubbish, etc).
    - If items posing a fire risk are noted during these inspections, then arrangements are made for their removal as soon as is reasonably practicable.
- At the completion of any work undertaken within a Collector Substation, personnel are required to visually inspect the yard and remove any flammable non-plant items (e.g., packaging, rubbish, oil containers, etc).
    - If items posing a fire risk are identified during these inspections, then arrangements are made for its removal as soon as is reasonably practicable (in this case before the first of December of that calendar year or immediately on declaration of the Fire Danger Period).

Overhead Power Lines

The 66kV overhead lines will be kept clear of flammable substances.

This is achieved through implementation of the ELCMP and regular inspections (refer to the section 9.3 - 9.4 Line Inspections).

Any work within 6.4 m of any overhead power line is controlled by work permit system and access procedures are put place to further control any ignition risk.

Fire Fighting Equipment

Firefighting equipment adequate to enable small fires to be extinguished is provided in all vehicles and collector substations.

- All Acciona Energia service vehicles will carry: -
    - One 2.5 kg, ABE powder-type, stored pressure fire extinguisher (externally mounted – for fires in vehicles and wind turbine base),
    - One 1 kg, ABE powder-type, stored pressure fire extinguisher (as part of the tools/equipment taken into the nacelle whenever personnel are in the wind turbines – for fires in wind turbine),
    - One 9 L, water type, stored pressure fire extinguisher (externally mounted – for grass fires), and
    - One steel rake and shovel (externally mounted – for grass fires).
- All collector substations will hold (as a minimum):
    - Two 5 kg ABE powder-type, stored pressure fire extinguisher

Firefighting is only to be attempted by personnel after they have reported the fire and then only if it is safe to do so.

Personnel shall have completed the following training, which shall be refreshed every 2 years.

- Global Wind Organisation (GWO) 'Fire Awareness' training which comprises of the following competencies.
    - Legislation
    - Risks & hazards
    - Fire combustion and fire spread
    - Fire extinguishing
    - Fire prevention
    - Firefighting equipment in a wind turbine
    - Fire extinguisher usage, and
    - Scenario-based practice exercise.

Monitoring the Program

Introduction

The following Inspections are conducted as per the Pre-Summer Bushfire Prevention Monitoring Program. Inspections and compliance activities are monitored via an online maintenance schedule program.

Operational Environmental Inspection

Environmental Inspections that support the Waubra Operational Environmental Management Plan are conducted and recorded twice a year. These are specific prompts for observations supporting wildfire prevention and management.

Overhead Line Inspection Plan

The 66 kV overhead power lines are periodically inspected as per 66 kV Inspections Instruction I01_PLN11_PAU01_GAE07006 r01.

The periodic inspections will be defined as:

- Line Inspection
- Easement Inspection
- Thermographic Inspection

All these inspections will be completed annually according to the following timeframe:

Inspection	Inspect During:	Report During:
Line Inspection	August – September	October
Pre-Summer Easement Inspection	August – September	October
Thermographic Inspection	August – September	October

Line Inspections

Line inspections are completed pole by pole and inspect following components:

- Poles
- Pole Hardware
- Insulators
- Line Hardware
- Line

The inspector is required to:

- Identify any defects
- Rate the condition of the key components, and
- Compare identified defects with the known defects and reassess the priority of the known defects.

Poles

Inspection of the pole itself in comprises a visual inspection of the:

- alignment and position of the pole

- pole for signs of decay
- area surrounding the pole for: -
    - degradation of the support base for the pole, and
    - impact on the decay of the pole.

Core samples of wooden poles will be undertaken when required.

Pole Hardware

Pole hardware is defined as the additional structure or components required to support the insulators, line hardware and line. Inspection of the pole hardware comprises a visual inspection of the:

- alignment and position of the pole hardware, and
- pole hardware for signs of decay.

Insulators

Insulators are defined as the insulating hardware supporting the line and line hardware from the pole and pole hardware. Inspection of the insulators comprises a visual inspection of the:

- alignment and position of the insulators, and
- insulators for: -
    - damage, and
    - foreign objects and contamination.

Any foreign objects or damaged or missing insulators will immediately be reported as a defect Work Order.

Line Hardware

Line hardware is defined as the hardware connected to the line and at the operating voltage of the line. Inspection of the line hardware comprises a visual inspection of the:

- alignment and position of the line hardware, and
- line hardware for: -
    - damage, and
    - for foreign objects and contamination.

Any foreign objects or damaged or missing line hardware will immediately be reported as a defect Work Order.

Lines

Line is defined as the primary conductor. Inspection of the line comprises a visual inspection of the:

- alignment and position of the line, and
- line for: -
    - damage, and
    - foreign objects and contamination.

Any foreign objects, damaged or missing line will immediately be reported as a defect Work Order.

Easement Inspections

Refer to the Electrical Line Clearance Management Plan (ELCMP) for more detail.

Thermographic Inspections

A thermographic inspection of the overhead power lines and line hardware will be undertaken to identify abnormal temperatures utilising a thermographic camera (still or video). These inspections will be conducted with the line under at least 25% load.

The thermographic inspector must have a minimum of 5 years' experience in thermographic inspections and report writing.

Upon detection of an abnormal temperature, the following information is collected:

- Identifier, location and description of the equipment and its components
- The current through the equipment at the time of survey
- The relative temperature rise in degrees centigrade of the abnormally heated equipment/component above that of associated normally operating equipment
- Relative temperature rise in degrees centigrade of the abnormally heated equipment/component over the same equipment/component of the other phases of the same circuit
- Electronic file of thermographic image of the equipment/component
- Electronic file of photographic image of the equipment/component
- details of other observed unusual conditions of the equipment
- Estimated emissivity factor for the abnormally heated equipment/component.

All abnormal temperatures will be subject to a Peak Temperature Rise Calculation to provide a more accurate risk assessment. Corrective work orders will be created and prioritised according this risk assessment (greatest risk has highest priority).

Training and Competence

Acciona Energia has an overarching Personal Induction and Training Procedure which defines processes for identifying training needs & competencies and record keeping. Acciona uses a web-based tool to record and monitor its training requirements.

Acciona Energia has an established and documented system to ensure that employee and contractors who are working on or near the overhead lines are suitably competent and adequately trained to carry out their duties.
The training standards are established through the industry committee VESI Skills.

Inspectors

The implementation of the BMP and associated ELCMP relies on part on the competence of inspectors. This section describes the processes and procedure Acciona Energia uses to ensure the competence of inspectors and auditors.

Inspectors are either an Acciona Energia employee or subcontractor who:

- Is trained in line inspection
- Has satisfactorily completed a 'Cert II in ESI – Asset Inspection – UET20612' within the last three years

- Has satisfactorily completed a 'Cert II in ESI – Powerline Vegetation Control – UET20312', and
- Is authorised by Acciona Energia to inspection lines as detailed in 8.1 of WWF ELCMP.

The inspector/s will be required to produce evidence of the above (e.g., present training certificates etc.) prior to commencing the work.

Line workers

The VESI Skills and Training Matrix stipulate the qualifications and refresher training for a Line worker. The employing contractor is required to organise training to the standards referred to in the matrix. The employing contractor will keep records of all training undertaken. All training records will be supplied to Acciona Energia prior to the commencement of works. Acciona Energia uses a web- based tool to record and monitor its training requirements.

Internal Auditors

An internal audit system is used to monitor the continuing competence of inspectors. Approximately 5% of the inspection will be randomly selected for internal audit. The internal auditor is not to have been involved in the initial inspection and will conduct the internal audit inspection according to the normal inspection procedure.

If a major discrepancy is found in the audited inspections, then the entire inspection shall be repeated. Additionally, the initial inspector would be required to undertake a refresher course before undertaking any further inspections for Acciona Energia.

External Auditors

In addition to the inspections described above, a separate inspection will be completed at least every 5 years by an independent, industry qualified pole inspector (external auditor) who:

- Is trained in line inspection
- as satisfactorily completed an Assets Inspection training course approved by Energy Safe Victoria (when available), and
- Is authorised by Acciona Energia to inspect lines.

If a major discrepancy is found by the external auditor inspections, then:

- the initial inspector and internal auditor may be required to undertake a refresher course before undertaking any further inspections for Acciona Energia, and
- any other inspections undertaken by the initial inspector and internal auditor shall be repeated unless they been reviewed by the external auditor.

Operational Contingency Arrangements

This section sets out the way in which the wind farm will be operated, or maintenance activities undertaken in various contingencies.

In the Event of a Bushfire

In the event of a bushfire in the area, Acciona Energia will, where appropriate, bring all staff back from the wind farm site to the Maintenance Facility and potentially send them home (i.e., evacuate the site). The procedure is covered in the Emergency Response Plan for the Waubra Wind Farm. This document is part of Acciona Energia Integrated Management System.

The site will be operated remotely, via the Control Room.

Electric safety devices, such as line, transformer, and turbine protection relays, will ensure that the plant is shut down in the event of smoke or flames interfering with the wind farm.

On Days with a Fire Danger Rating of Code Red

In the event of a Fire Danger Rating of Code Red being declared for the area, Acciona Energia will instruct staff to remain at the Waubra Wind Farm Maintenance Facility.

Electric safety devices, such as line, transformer, and turbine protection relays, will ensure that the plant is shut down in the event of smoke or flames interfering with the wind farm.

On Days Declared as a Day of Total Fire Ban

The operation of the Waubra Wind Farm will continue as normal during days of Total Fire Ban (Country Fire Authority Act, 1958). However maintenance activities will be altered such that:

- Vehicle travel will be confined to public and wind farm roadways, and
- Hot work is not permitted (except where required in emergency circumstances such as catastrophic plant failure, under a Section 40 Permit).

Mitigation procedures described in this BMP ensure that all facilities can be operated and maintained without significantly increasing the risk of starting a bushfire.

During the Fire Danger Period

The operation of the Waubra Wind Farm will continue as normal during declared Fire Danger Periods. However maintenance activities will be altered such that:

- Vehicle travel will be confined to public and wind farm roadways wherever practicable, and
- Hot work shall be restricted (via Hot Work Permits) and appropriate precautions adopted to minimise the risk of fire.

Mitigation procedures described in this BMP ensure that all facilities can be operated and maintained without significantly increasing the risk of starting a bushfire.

Fire Investigations

Assistance with Fire Investigation Policy Statement

Acciona Energia will provide all practical assistance to fire control authorities investigating bushfires in the vicinity of the Waubra Wind Farm. This will include:

- Allocating authorised staff to accompany Fire Investigators investigating any potential/suspected ignition sources within the wind farm
- Providing technical details relating to the fire initiating potential of various items of plant
- Providing access to bushfire related policies and/or procedures, and
- Accepting recommendations from CFA for improvement as required.

Near Misses

Following an event that could have led to a bushfire (near miss), Acciona Energia will undertake the following process within 20 business days (except for the replacement or upgrade to equipment requiring long lead time procurement) to ensure the organization implements the appropriate measures to mitigate an event occurring.

- Identify the cause/source of the potential ignition
- Investigate and document: -
    - The circumstances leading up to the potential ignition
    - Reasonably practicable changes that can be made that will mitigate similar events recurring to: -
        - To the design of the item of plant involved in the potential ignition (e.g., intrinsic design changes, clearance requirements, vegetation control requirements etc), and/or
        - To the operations and maintenance procedures that led to the potential ignition, and
- Implement the appropriate combination of plant/procedural changes that will mitigate similar events recurring.

Actual Bushfire Ignition Incidents

Following a bushfire event in the Waubra Wind Farm area, Acciona Energia will cooperate with the CFA and other fire control authorities to investigate the cause of the fire. Where it is determined that the operations of the Waubra Wind Farm contributed to the ignition of the bushfire or hindered firefighting efforts, Acciona Energia will undertake the following process within 20 business days (except for the replacement or upgrade to equipment requiring long lead time procurement) to ensure the organization implements the appropriate measures to mitigate an event occurring:

- Identify the cause/source of the ignition, and
- Investigate and document: -
    - The circumstances leading up to the ignition
    - Reasonably practicable changes that can be made that will mitigate similar events recurring to: -
        - the design of the item of plant involved in the potential ignition (e.g., intrinsic design changes, clearance requirements, vegetation control requirements etc)
        - the operations and maintenance procedures that led to the potential ignition, and

- Implement the appropriate combination of plant/procedural changes that will mitigate similar events recurring.
- Identify and document where firefighting efforts were hindered by the operation of the Waubra Wind Farm, and
- Based on an analysis of that hindrance, implement changes to: -
    - operations and maintenance plans, and/or
    - plant design to reduce the impact on the firefighting effort in future fires.

Public Awareness of Power Lines and Bushfire Risks

Enhancing public awareness of this BMP will be achieved through actions including but not limited to:

- Publication of this BMP and the ELCMP on our public website
- Providing landowners with our overhead power lines and underground cables or substations on their land with:
- Providing Emergency Services with
    - Opportunities for their personnel to
        - Familiarise themselves with the Waubra Wind Farm and its Emergency Response Plan
        - Participate in Exercises of the Emergency Response Plan
    - Information regarding the procedures that allow for the de- energisation and isolation our electrical apparatus in emergency situations.

Management of the BMP

This section describes the processes and procedures to be used by Acciona Energia to manage this plan.

Document Control & Access

The custodian of this BMP shall be Acciona Energia Director - Operations. The document is to be readily available, and to be produced upon request of

- the external auditor,
- key external stakeholders, and
- the general public.

The BMP is stored electronically, and are available at the Waubra Wind Farm Maintenance Facility and Acciona Energia Corporate Office located at:

Melbourne Central Tower
Level 38
360 Elizabeth Street
Melbourne VIC 3006
Regular office hours: 08:30 – 17:00 Mon-Fri

This BMP is also available on the Company's website.

https://www.acciona.com.au/waubra

Monitoring of the Plan

The primary mechanism for monitoring this plans performance will be to record several relevant parameters (Key Performance Indicators) including:

- Number of near miss incidents
- Number of hazards identified, and
- Internal and external audit results.

These will be recorded in an appropriate data store (e.g., Acciona Event Management System and/or Integrated Management System). by the Acciona Energia's Site Manager or delegate. A summary will be provided to the Responsible Person annually so that improvements to the plan, design and operations and maintenance procedures can be made if necessary.

Additionally, standard asset management processes will provide inputs into the BMP. Records will be used to ensure that trends and failures that form potential sources of ignition are tracked and controlled.

Auditing of the Plan

The WWF Bushfire Mitigation Plan will be audited in accordance with PAU07_GAE07020 Internal audit procedure and internal audit schedule.

Auditing of inspections

Any part of this plan or its associated systems, procedures and reports may be inspected at any time by independent third-party inspectors as a part of Acciona Energia's internal audit process.

Identifying Deficiencies & Revising the Plan

Deficiencies in this BMP may be identified by a variety of means such as:

- Annual review of this BMP by the Site Manager,
- Annual review by Energy Safe Victoria,
- External Audit,
- Fire or other related Investigations, •

  Comments and suggestions from: -

  - members of the public,
  - Management review,
  - Internal audit or
  - an officer of a public authority.

Document Review & Timing

This BMP shall be prepared by Acciona Energia and submitted to ESV prior to 1 July in each year as required by Section 83A of the Act.

The BMP may be revised more frequently in response to:

- significant changes to factors such as: -
    - legislation
    - policy
    - industry practice
    - standards, and
    - responsibilities.
- Deficiencies identified in the plan's implementation
- Deficiencies identified in the inspection process, and
- Deficiencies revealed by incident investigations.

Dispute Resolution

Written or verbal submissions on this plan or the implementation of this plan can be made at any time during the life of the project. Written submissions and any other comments should be addressed to:

Name	Attn: Community Relations Coordinator
Address	Melbourne Central Tower Level 38, 360 Elizabeth St Melbourne, Vic 3000
Phone	03 9027 1000
e-mail	energy.community.relations.au@acciona.com

If the person listed above is not contactable, a written submission can be lodged to the Acciona Energia's Melbourne Office (using the address given above).

Acciona Energia shall contact the submitter and attempt to settle the dispute in a manner that is satisfactory to both Acciona Energia and the member of public and complies with the Act, Regulations and Code.

In the unlikely situation where a dispute cannot be resolved by this person, Acciona Energia will provide details of the dispute ESV in conjunction with the BMP itself to independently provide guidance on a suitable resolution. ESV will only resolve disputes that relate to their role as electrical safety regulator and not matters associated with other disputes, including amenity disputes.

Related Documentation and References

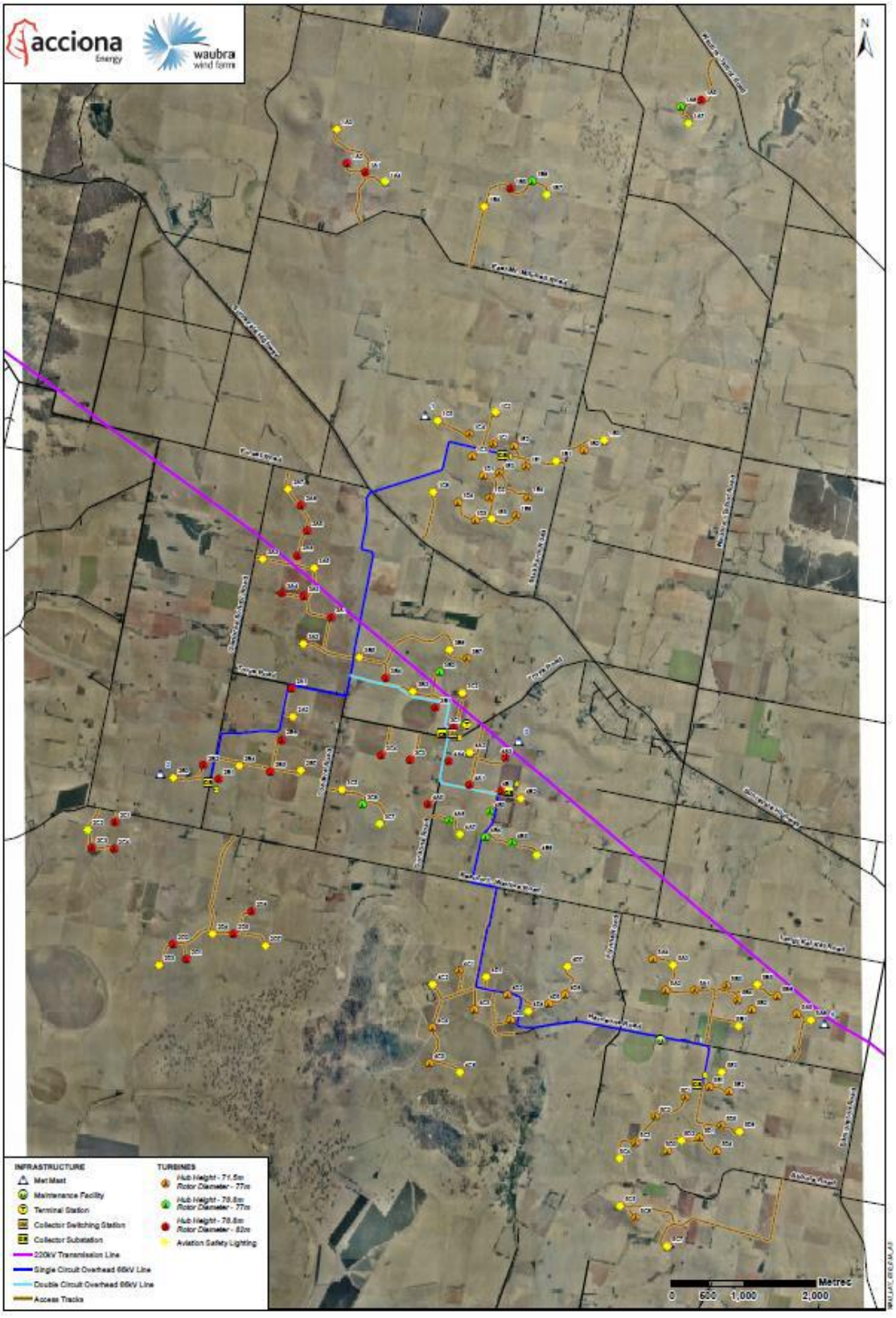
Document Number	Document Title
PLN01_GAE07016_WWF	WWF Operational Environmental Management Plan
PLNAU08104_WWF	Waubra Wind Farm Electric Line Clearance Management Plan 2023 - 2024
I01_PLN11_PAU01_GAE07006	66Kv Inspection Instruction
	Electricity Safety Act 1998 (version 081, 01-January-2021).

	Electricity Safety (Bushfire Mitigation) Regulations 2013 (version 005, 27 June 2020).
	Electricity Safety (Electric Line Clearance) Regulations 2020 (version 001, 27-June-2020).
	https://www.esv.vic.gov.au/about-esv/legislation-and-regulations/legislation-administered-by-esv/
	https://www.esv.vic.gov.au/
	http://www.aer.gov.au/

Record of Changes

Rev.	Date	Description
r8.2	1/7/2018	2018-2019 submission Updates: Nil
r09		Transition to new template no change to content except for the corporate address.
r10	20/06/2019	Updated as follows for the 2019-2020 plan; • Site map • Weblinks • OEMP to V2.0 - 2018
r11	24/4/2019	Minor administrative and wording amendments: • Removal of community consultation paragraph • WWF contact information • AE Policy reference • Section 8.2 frequency of inspections • Section 12.1
r12	12/02/2020	Minor administrative and wording amendments: • Update of Contact Positions • Update of Act • Update of Related Documentation and References
R13	03/02/2021	Minor administrative and wording amendments: • Update of Acts • Update of Related Documentation and References • Includes reference to 66kV Inspections Instruction
R14	28/01/2022	Minor administrative and wording amendments: • Update of Acts & Regs • Update of position contacts • Update of business name • Update to Dispute Resolution to be standardized • Update to auditing section • Addition of Appendix c
R15	01/06/2023	• Updated the person responsible for preparing the plan. • Updated email address to Compliance business area. • Updated Australian and Victorian Fire Danger Ratings
R16	06/10/2023	• Update emergency contact details • Include training requirements for line workers.

Appendix A – Overview Map of Waubra Wind Farm



Appendix B – CFA Ratings Explained

The CFA provides a variety of ratings according to different contexts. It is important that readers do not confuse these ratings and assessments. This Appendix provides a brief explanation of some of the ratings provided by CFA.

Under Section 80 of the Act the Country Fire Authority (CFA) is responsible for determining the Fire Hazard Rating of the private land in Country Areas of Victoria.

The assignment of low and high Fire Hazard Ratings (FHRs) aims to safeguard life and property by preventing overhead electric line-related ignitions, on land-uses where such ignitions have the potential to cause damage to life, property and/or the environment. The potential for significant bushfire spreads (encompassing grassfire through to forest fire) and resultant damage is assessed on different land-uses through the application of worst- case scenario weather conditions.

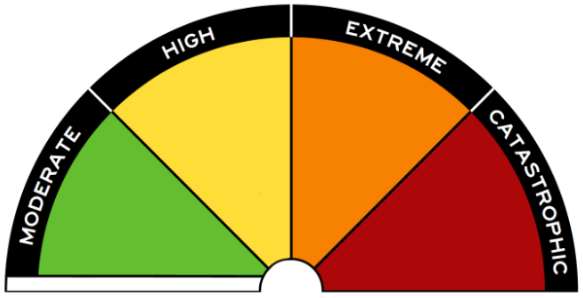
In contrast, Bushfire Prone Areas (BPAs) and Bushfire Management Overlays (BMOs) define areas with significant potential for the ignition of houses due to sustained and significant ember attack as well as radiant heat and/or direct flame contact from going bushfires. These areas generally include trees and shrubs and vegetation that can support crown fires. Whereas BPAs and BMOs generally consider areas of standing vegetation, Fire Hazard Ratings are assigned on the premise of continuous surface vegetation and/or fuel such as open grasslands.

The Fire Danger Rating (FDR) tells us how dangerous a fire would be if one started. It helps us know when conditions are dangerous enough to enact our bushfire survival plan. Fire Danger Ratings are forecast by Bureau of Meteorology for up to four days in advance and are based on weather and environmental conditions (e.g., fuel loadings and moisture content). The Fire Danger Rating is our prompt to take action to stay safe [7].

[7] Country Fire Authority: https://www.cfa.vic.gov.au/warnings-restrictions

The table below [8] explain what each Fire Danger Rating means.

The new Fire Danger Ratings



MODERATE
Plan and prepare

HIGH
Be ready to act

EXTREME
Take action now to protect life and property

CATASTROPHIC
For your survival, **leave bushfire risk areas**

There are four levels of fire danger in the new system:

- **Moderate** - Plan and prepare
- **High** - Be ready to act
- **Extreme** - Take action now to protect your life and property
- **Catastrophic** - For your survival, leave bushfire risk areas

What does it mean?

If a fire starts and takes hold, lives are likely to be lost.

- These are the most dangerous conditions for a fire.

What should I do?

For your survival, leave bushfire risk areas.

- Your life may depend on the decisions you make, even before there is a fire.
- For your survival, do not be in bushfire risk areas.
- Stay safe by going to a safer location early in the morning or the night before.
- Homes cannot withstand fires in these conditions. You may not be able to leave and help may not be available.

[8] See more at: https://www.cfa.vic.gov.au/warnings-restrictions/total-fire-bans-and-ratings

What does it mean?

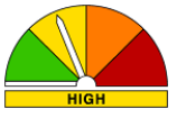
Fires will spread quickly and be extremely dangerous.

- These are dangerous fire conditions.
- Expect hot, dry and windy conditions.

What should I do?

Take action now to protect your life and property

- Check your bushfire plan and that your property is fire ready
- If a fire starts, take immediate action. If you and your property are not prepared to the highest level, go to a safer location well before the fire impacts.
- Reconsider travel through bushfire risk areas.
- Leaving bushfire risk areas early in the day is your safest option.



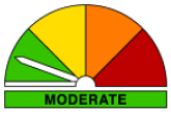
What does it mean?

Fires can be dangerous.

What should I do?

Be ready to act.

- There's a heightened risk. Be alert for fires in your area.
- Decide what you will do if a fire starts.
- If a fire starts, your life and property may be at risk. The safest option is to avoid bushfire risk areas.



What does it mean?

Most fires can be controlled.

What should I do?

Plan and prepare.

- Stay up to date and be ready to act if there is a fire.

Appendix C – Summer Fire Season Preparedness

The table below outlines the key actions, timing, responsibilities, and relevant Procedure/s.

ACTIONS	***TIMING***	***RESPONSIBLE***	***RELEVENT PROCEDURE***
Weed management – base of turbines	October	Site Mgr	WWF Bushfire Mitigation Plan
Weed management – substations	Twice per year	Site Mgr	WWF HV Asset Maintenance Plan & WWF Bushfire Mitigation Plan
Firefighting equipment vehicles, sub stations & office	Twice per year	Site Mgr	Operational Enviromental Management Plan
Less than 100mm of grass/leaf litter within 10m of O&M buildings.	Twice per year	Site Mgr	Operational Enviromental Management Plan
Litter and waste on site, and correct disposal	Twice per year	Site Mgr	Operational Enviromental Management Plan
66Kv line Inspection, poles, wire, and fitting integrity.	Annual, commence August of each year.	Site Mgr	Electrical Line Clearance Management Plan
66Kv easement inspection	Annual, commence August of each year.	Site Mgr	Electrical Line Clearance Management Plan