

Incident and safety performance reporting guidelines

Major electricity companies

July 2022

This document has been endorsed by the Victorian Energy Safety Commission.

Authorised and published by the Victorian Government, Melbourne

March 2022

© Copyright State of Victoria 2022

You are free to re-use this work under a Creative Commons Attribution 4.0 licence, provided you credit the State of Victoria (Energy Safe Victoria) as author, indicate if changes were made and comply with the other licence terms. The licence does not apply to any images, photographs or branding, including Government logos.

ISBN: 978-1-925838-68-8 (online)

This document is also available online at www.esv.vic.gov.au

Contents

General	4
Definitions	5
Reporting serious electrical incidents	7
Background	7
Serious electrical incidents reportable under regulation 28	7
Reporting process for serious incidents under regulation 28	9
Other serious electrical incidents reportable under regulation 29	11
Reporting process for other serious incidents under regulation 29	12
Other reporting	13
Quarterly reporting of safety initiatives.....	13
Fire season reporting.....	14
Electric line clearance reporting	14
Appendix A: Relevant sections of the regulations	15
Appendix B	16
R.28 Fire and R.29 reporting examples	16
Regulation 28 reportable fire examples	16
Regulation 29 reportable incident examples	19
Reports not required examples	20

General

Energy Safe Victoria (ESV) is the state's safety regulator for electricity, gas and pipelines. We are an independent government agency responsible for the safe generation, supply and use of electricity, gas and pipelines.

Our role includes investigating events or incidents which have implications for electrical safety and advising the electricity industry and the community about electrical safety.

These guidelines set out the manner and form in which major electricity companies (MECs) must report serious electrical incidents to ESV as required by the *Electricity Safety Act 1998 (Act)*, and regulations 28 and 29 of the *Electricity Safety (Management) Regulations 2019*.

These guidelines also set out other reporting requirements of MECs relating to safety initiatives, the bushfire season, and electric line clearance under the Act and associated regulations including the *Electricity Safety (Bushfire Mitigation) Regulations 2013* and the *Electricity Safety (Line Clearance) Regulations 2020*.

To immediately report a serious electrical incident:

Call 1800 000 922 (24 hours)

Refer to esv.vic.gov.au/report-incident for further information

Under the requirements of regulation 28(3) of the *Electricity Safety (Management) Regulations 2019*, ESV must consult with each MEC before issuing or amending these guidelines.

Note that this guideline applies to reporting of incidents that were initiated from an MEC asset whether or not the event resulted in an incident on the MEC network, or in a customer installation.

Where an incident occurs in an installation, and is caused by the installation, an MEC who is aware of the incident must report it in accordance with the requirement published on ESV's website:

esv.vic.gov.au/report-incident

Definitions

The following definitions apply to these guidelines:

Act, or the Act	<i>Electricity Safety Act 1998</i>
All relevant details	The details of the incident within the knowledge of the person reporting the incident.
As soon as practicable	Defines the period immediately after making any necessary contact with emergency services, once the site has been made safe.
Business day	This is a day during the week other than a Saturday or Sunday or a public holiday under the <i>Public Holidays Act 1993</i> (or its successors).
Dislodged asset	For the purposes of regulation 28(2)(g)(vii) of the <i>Electricity Safety (Management) Regulations 2019</i> , incidents involving dislodged asset are reportable when the dislodged asset poses an imminent risk of electrocution, shock or physical harm to workers or the public. Any dislodgement that does not pose an imminent risk to workers or the public is not reportable to ESV.
Failure	This is the inability to function as designed.
Fire	This is a process in which substances combine chemically with oxygen from the air and typically gives out evidence of flame, bright light, heat, and smoke or a destructive burning of something.
HBRA	Hazardous Bushfire Risk Area.
High Voltage Injection	Injection of a higher voltage into a lower voltage circuit (including a.c. and d.c).
Imminent risk of electrocution	Refers to any situation that requires immediate corrective or preventative action to prevent electrocution of a person.
Injury	Refers to bodily harm requiring medical attention.
LBRA	Low Bushfire Risk Area.
MEC	A major electricity company as defined in the Act.
MEC worker	A person who is employed, engaged, contracted or under the control of an MEC.
Medical attention	Refers to medical treatment by a registered medical practitioner other than as a precautionary check or first aid treatment.
Other serious electrical incident	Refers to an electrical incident that, as per the Act, causes or has the potential to cause: <ul style="list-style-type: none">– the death of or injury to a person

- significant damage to property
- a serious risk to public safety
- but, which is not a serious electrical incident listed in regulation 28 of the Electricity Safety (Management) Regulations 2019.

Further guidance on what we consider to be an “other serious electrical incident” is provided in this guideline under *Reporting of other serious electrical incidents*.

Potential to cause	Defines having or showing the capacity to develop into something in the future; i.e. possible
REFCL	Rapid Earth Fault Current Limiter (REFCL). A REFCL is a protection device that enables polyphase electric lines to have the required capacity, as defined in the <i>Electricity Safety (Bushfire Mitigation) Regulations 2013</i> .
Reverse polarity	is a transposition of active(s), neutral and/or earth conductors.
Serious electrical incident	as defined in the Act, means an incident involving electricity which causes or has the potential to cause <ul style="list-style-type: none"> • the death of or injury to a person • significant damage to property • a serious risk to public safety.
serious risk to public	Refers to the possibility that harm may occur to the public from an electrical network asset.
Significant disruption to the community	Defines an event involving electricity which causes or has the potential to cause any of the following: <ul style="list-style-type: none"> • an incident serious enough to warrant on site action by a statutory body or an emergency service provider (excluding attendance by emergency services to keep the public away from a potentially dangerous situation)¹ to mitigate risk to the public • a single incident that causes widespread interruptions and/or prolonged disruption to the community • any unplanned transmission supply interruption resulting in outage to a distribution customer or customers • any unplanned event resulting in significant disruption to vehicle or public transport traffic.
Uncontrolled release of a live conductor	Defines an incident that occurs when work is being undertaken on live conductor and that conductor is released in an uncontrolled manner

¹ The presence of an emergency unit at a cable on the ground pending attendance by a crew to determine whether or not it is a live cable requiring rectification is an event that is not considered a serious incident of *significant disruption to the community*. That said, it may constitute such an event if another serious event (e.g. someone is injured, there was a risk of personal injury, etc.) occurs.

Reporting serious electrical incidents

These are the reporting guidelines for the purposes of regulation 28 and 29 of the *Electricity Safety (Management) Regulations 2019*.

MECs must notify and report any serious electrical incident to ESV as soon as practicable in accordance with the reporting requirements set out below.

Background

Section 142 of the Act requires a MEC to report the following to ESV, in accordance with the *Electricity Safety (Management) Regulations 2019*:

- any serious electrical incident which occurs in relation to its supply network (section 142(1)), and
- any serious electrical incident of which it is aware and which occurs in relation to an electrical installation to which it supplies electricity (section 142(2)).

Regulation 28 specifies the serious electrical incidents that must be notified and reported in accordance with reporting guidelines

Regulation 29 allows ESV to specify other serious electrical incidents that must also be notified and reported in accordance with this reporting guideline.

Failure to report a serious electrical incident is an offence under the Act and can lead to penalties of:

- 300 penalty units (natural person) or 1500 penalty units (body corporate) (section 142(1)), or
- 10 penalty units (natural person) or 50 penalty units (body corporate) (section 142(2)).

Serious electrical incidents reportable under regulation 28

The following table provides examples of incidents that are reportable as serious electrical incidents under regulation 28.

These are examples only. The list is not exhaustive.

If in doubt, MEC's should contact ESV for more information.

Table 1 – Serious electrical incidents reportable under regulation 28

Category	Examples (not exhaustive)	Comment
Incident caused the death or injury of a person	<ul style="list-style-type: none"> • Person contacts a live asset and is electrocuted or injured. 	Refer definition of injury
Incident caused significant property damage	<ul style="list-style-type: none"> • Loss of a house or part of a house due to fire caused by the supply network. • Pole fell onto a building or vehicle • Bushfire caused by the supply network that destroys significant amount of crops, fences, houses, etc. 	

Category	Examples (not exhaustive)	Comment
Incident caused significant disruption to the community	<ul style="list-style-type: none"> Major event disrupted, such as; Grand Final, Melbourne Cup, Grand Prix, Moomba, etc. Interruption of supply for a major airport; Tullamarine, Avalon Interruption for a town of greater than 10,000 population for greater than 4 hours Interruption to rail caused by collapse of asset across rail line 	Refer definition of significant disruption to the community
Incident involved a Transmission line	<ul style="list-style-type: none"> Transmission Tower collapse Transmission conductor comes to ground Transmission voltage injects into another voltage 	
Incident involved an imminent risk of electrocution	<ul style="list-style-type: none"> Live network asset or other live metal work (e.g. traffic light, sign post, etc.) within reach of a person at ground level An untrained person is working within regulatory distance specified in the <i>Electricity Safety (General) Regulations</i> near live bare conductors Tree being cleared comes into contact with live asset 	Refer definition of imminent risk of electrocution
Incident involved a fire originating from the MEC's supply network	<ul style="list-style-type: none"> Asset failure, animal or vehicle contact causing burnt grass or tree Burnt pole, crossarm, fuse, etc. Vegetation contacts live asset causing vegetation to burn 	Refer definition of fire and refer examples provided in appendix A
Incident involved an explosive failure of an asset	<ul style="list-style-type: none"> Transformer bushing explosion 	
Incident involved a reverse polarity	<ul style="list-style-type: none"> Active and neutral transposed (noted when power turned on) 	Refer definition of reverse polarity
Incident involved a high voltage injection	<ul style="list-style-type: none"> A conductor of a higher voltage fails and falls onto a conductor of a lower voltage Injection into LV from earthing system 	Refer definition of high voltage injection
Incident involved a switching operation that inadvertently caused energisation	<ul style="list-style-type: none"> A switch is closed that makes a conductor alive which should be dead or isolated 	

Category	Examples (not exhaustive)	Comment
Incident involved a person coming into contact with an energised network asset	<ul style="list-style-type: none"> A person, or something a person is holding that is not rated as an insulated item, such as a tree branch, tool, or pipe, contacts a live conductor 	
Incident involved an energised bare conductor that is less than 4.3 metres above the ground	<ul style="list-style-type: none"> A conductor falls from its support and hangs above ground whilst alive A conductor is struck (e.g. from a fallen branch) and comes to ground alive 	
Incident involved part of the MEC's supply network becoming dislodged from its supporting structure	<ul style="list-style-type: none"> A transformer moves off the support bracket and remains supported by the leads 	
Incident involved an uncontrolled release of a live conductor	<ul style="list-style-type: none"> A live conductor slips from a gloved hand and contact is made causing an outage whilst performing live work 	

Reporting process for serious incidents under regulation 28

Reporting will occur as follows:

Notification

- As soon as practicable, typically no more than two hours after the incident, the MEC will phone the ESV emergency call centre (ph. 1800 000 922).
- Within two business days of becoming aware of an incident, the MEC will submit a notification in OSIRIS².

Incident report

The MEC will then provide further reporting of the incident:

- Within 20 business days of the MEC becoming aware of an incident, the MEC will:
 - open the existing Notification for the incident in OSIRIS
 - complete the mandatory fields for an Incident Report, and
 - submit the Incident Report to ESV.
- Where the MEC has not completed its internal incident investigation within 20 business days of the incident, the MEC will undertake the following action as soon as an investigation of the incident is completed:
 - open the existing incident report for the incident in OSIRIS
 - review the contents of the incident report previously provided to ESV and amend/update it

² A user guide for OSIRIS is available on the ESV FTP site

- based on the findings of the internal incident investigation
- attach a copy of the internal incident report, and
- re-submit the incident report to ESV.

Incident confirmation

The MEC must ensure all regulation 28 incidents are submitted in accordance with this reporting guideline, and should regularly check their internal incident recording system to ensure all relevant incidents have been reported, and all relevant incident details are reported in OSIRIS.

On a quarterly basis, the MECs should check the completeness and accuracy of records in OSIRIS.

Should there be any discrepancies, the MEC must:

1. For previously unreported incidents:
 - create and submit the Notification and Incident Report to ESV via OSIRIS.
2. For reports where the internal incident investigation is listed in OSIRIS as still to be completed:
 - check the status of the Incident Report is still correct.
 - if the investigation has been completed update the Incident Report (including attaching the internal investigation report) and submit the Incident Report to ESV.
3. For reports where the Incident Report information is incorrect or incomplete:
 - request that ESV re-open the Incident Report for updating in OSIRIS
 - update the Incident Report information in OSIRIS, and
 - re-submit the incident report to ESV.

A MEC can request ESV to re-open an incident report in OSIRIS at any time after it was submitted to ESV. Any amendments will be subject to ESV review and acceptance.

Other serious electrical incidents reportable under regulation 29

The following table outlines the other serious electrical incidents that are reportable under regulation 29.

Serious electrical incidents reportable under regulation 28 must be reported in accordance with the requirements detailed above.

Table 2 – Other serious electrical incidents reportable under regulation 29

Incident	Incident type	Comment
Asset failure not resulting in fire	<ul style="list-style-type: none"> • Bare conductor failure/breakage <ul style="list-style-type: none"> – This includes failure/breakage of any tension section (e.g. terminations, compression joints, etc.) but excludes broken strands and failures of non-tension sections (e.g. bridges, ties, etc.). <p>Note: Any failure or breakage involving an energised bare conductor that is less than 4.3 metres above the ground is reportable as a serious electrical incident under regulation 28.</p> • Cross-arm failure • Neutral failure or degradation of MEC neutral conductor identified by an event • Pole (the pole has fallen, or has failed or snapped, and could imminently fall) • HV tie failure • HV fuse failures/mal-operations (including 'hang ups', etc. where no fire has occurred) • Insulator failures (transmission voltages only) • Primary plant failures (transmission voltages only) • Any asset failure involving a network event with evidence of significant charring, smouldering, smoking, melting or heat damage. (Examples are provided in Appendix B.) 	<p>Excludes failures caused by external impact such as vehicle strikes, tree or branch failure and human interference such as vandalism.</p> <p>Failure due to wind is not considered an external impact.</p>
Minor shock	Any person receives a minor shock (including shocks received through induction) as a result of direct or indirect contact with any MEC assets or an electrical installation (initiated from an MEC incident)	
Interference and damage	<p>Any damage (wilful or accidental) or interference with MEC electrical assets includes, but is not limited to, the following:</p> <ul style="list-style-type: none"> • A person removed network fuses without authorisation • A person operated switch without authorisation • A person stole, or attempted to steal, energised network assets • A person accessed network enclosures without authorisation 	

Incident	Incident type	Comment
	<ul style="list-style-type: none"> A person vandalised network assets resulting in damage to electrical assets 	
No Go Zone breach	<ul style="list-style-type: none"> A person or mobile plant breached the No Go Zone without authorisation A temporary or permanent structure was erected that breached the No Go Zone 	Where regulation clearances have been breached the incident is required to be reported under regulation 28.
MEC works practice incident	<ul style="list-style-type: none"> Operating errors (remote and field operation) <ul style="list-style-type: none"> Includes, but is not limited to, earths left on, operation of incorrect item, incorrect sequence of operation and inadvertent protection trips while testing Breaches of the Blue Book Live line work involving authorised persons. 	
Protection fails to operate as designed	<ul style="list-style-type: none"> Includes non-operation of protection system as designed or incorrect settings or a failed protection system component 	

Reporting process for other serious incidents under regulation 29

Incident report

Within 20 business days, following the end of each financial quarter, the MEC will:

- complete the quarterly report spreadsheet³ for all incidents reportable under regulation 29, and
- upload the quarterly spreadsheet to OSIRIS.

Quarterly confirmation

The MEC must ensure all regulation 29 incidents are submitted in accordance with this reporting guideline, and should regularly check their internal incident recording system to ensure all relevant incidents have been reported, and all relevant incident details are reported in OSIRIS.

On a quarterly basis, the MECs should check the completeness and accuracy of records in the MEC quarterly reporting spreadsheets.

Should there be any discrepancies, the MEC must:

- For previously unreported incidents:
 - include the details of the incident in the next quarterly report.
- For reports where the previously submitted quarter reporting spreadsheet information is incorrect:
 - include the details as per the previous report (including the errors) and mark the record for deletion in the next quarterly report
 - include the correct details for the incident in the next quarterly report.

Any amendments will be subject to ESV review and acceptance.

³ Spreadsheet available from ESV

Other reporting

Quarterly reporting of safety initiatives

ESV may issue directions under the Electricity Safety Act (sections 86A, 141, 141A, 141AC and 145). ESV or the Governor in Council may also grant exemptions or time extensions to a MEC under:

- the Act (section 120W and 120X) the *Electricity Safety (Management) Regulations* (regulation 32)
- the *Electricity Safety (Bushfire Mitigation) Regulations* (regulation 13) or
- the *Electricity Safety (Electric Line Clearance) Regulations* (regulation 11)

As part of these initiatives (direction or exemption), MEC's are required to demonstrate that the initiative is being implemented as required. Each MEC is required to submit a quarterly summary report to ESV detailing the status of any initiative it is implementing.

ESV may also request submission of a revised ESMS, and can include in this request a requirement for the MEC to demonstrate, through reporting, that an initiative is being addressed in accordance with the ESMS.

The format of the report is to include, but not limited to, the following:

- the name of the initiative
- the date the initiative was issued
- a measure for the initiative (as appropriate for the initiative e.g. number replaced, kilometres replaced, etc.)
- the volumes to be completed as part of the initiative
- the target date for completion of the initiative
- the volumes completed to date
- a quarterly cumulative forecast to achieve completion by the target date
- any explanatory comments
- other details as required by the initiative.

Measures for progress reporting must be agreed between ESV and the MEC before the initiative starts.

The report must be submitted to ESV within 20 business days of the end of each quarter.

Bushfire mitigation reporting

Monthly bushfire mitigation program reporting

Affected MECs must submit a report to ESV on a monthly basis (or as otherwise agreed) that includes details of all works completed to date related to delivery of the prescribed bushfire mitigation program, in compliance with regulations 7(1)(ha), (hc) and (hd) of the *Electricity Safety (Bushfire Mitigation) Regulations 2013*.

The prescribed bushfire mitigation programs include the REFCL program, powerline replacements in electric line construction areas, and the single wire earth return automatic circuit recloser program.

Reports must be submitted using the templates provided by ESV.

Annual bushfire mitigation program reporting

By 1 August each year, affected MECs must submit an annual report that includes details of all works performed for the past reporting period, and all works forecast to be completed by the end of the next reporting period, in relation to the prescribed bushfire mitigation program, in compliance with S120P of the Act.

The reporting period is from 1 May to 30 April of the following calendar year.

Reports must be provided in accordance with ESV's reporting guideline 'Specification for S120P Annual Compliance Reports' and have been approved by the MEC's board.

Fire season reporting

Between 1 September to 30 April each year; major electricity companies are required to report to ESV on the status of their Bushfire Mitigation Index, maintenance items to be actioned before the end of the bushfire season, and REFCL operations. These items will be reported to ESV through the BMI and the maintenance reporting dashboard in OSIRIS, and the REFCL reporting email address.

Reporting of Bushfire Mitigation Index, maintenance items and REFCL operations is not required outside of the designated period.

Details on how to report the information can be found in the OSIRIS user guide (the user guide can be downloaded from the ESV FTP server).

Electric line clearance reporting

Throughout the year, major electricity companies are required to report on the status of their vegetation inspection and line clearance activities to ESV, in preparation for, and during, the annual fire season. Inspection and clearance data for HBRA and LBRA will be separately reported to ESV through the Vegetation clearance reporting dashboard in OSIRIS.

Reporting frequency is as follows:

- for spans in HBRA: monthly between 1 May and 31 August (pre-fire season) and weekly between 1 September and 30 April (during fire season)
- for spans in LBRA: monthly between 1 May and 30 April (year-round).

Appendix A: Relevant sections of the regulations

The following is an extract from the *Electricity Safety (Management) Regulations 2019*.

28 Requirements for reporting of serious electrical incidents by major electricity companies

- (1) For the purposes of section 142(1) and (2) of the Act, an electricity supplier that is an MEC must, if this regulation applies—
 - (a) notify Energy Safe Victoria of a serious electrical incident as soon as practicable as specified in reporting guidelines issued by Energy Safe Victoria from time to time; and
 - (b) provide Energy Safe Victoria with a report of the incident in accordance with the reporting guidelines.
- (2) This regulation applies if a serious electrical incident—
 - (a) caused the death of or injury to a person; or
 - (b) caused significant property damage; or
 - (c) caused significant disruption to the community; or
 - (d) involved an electric line with a nominal voltage of more than 66 000 volts; or
 - (e) involved an imminent risk of electrocution; or
 - (f) involved a fire originating from the MEC's supply network; or
 - (g) involved any of the following—
 - (i) an explosive failure of an asset; or
 - (ii) a reverse polarity; or
 - (iii) a high voltage injection; or
 - (iv) a switching operation that inadvertently caused energisation; or
 - (v) a person coming into contact⁴ with an energised network asset; or
 - (vi) an energised bare conductor that is less than 4.3 metres above the ground; or
 - (vii) part of the MEC's supply network becoming dislodged from its supporting structure⁵; or
 - (viii) an uncontrolled release of a live conductor.

29 Reporting of other serious electrical incidents by major electricity companies

- (3) This regulation applies to serious electrical incidents other than serious electrical incidents described in regulation 28(1).
- (4) For the purposes of section 142(1) and (2) of the Act, an electricity supplier that is an MEC must report to Energy Safe Victoria a serious electrical incident to which this regulation applies in accordance with the reporting guidelines referred to in regulation 28(1).

⁴ Whether that contact is direct or via something being held that is not fully insulated by design.

⁵ See definition of dislodged asset.

Appendix B

R.28 Fire and R.29 reporting examples

This appendix contains examples for reporting of Regulation 28 fires and Regulation 29 charring, smouldering, smoking or melting incidents. They are compiled here to provide examples of how ESV expects these incident types to be reported.

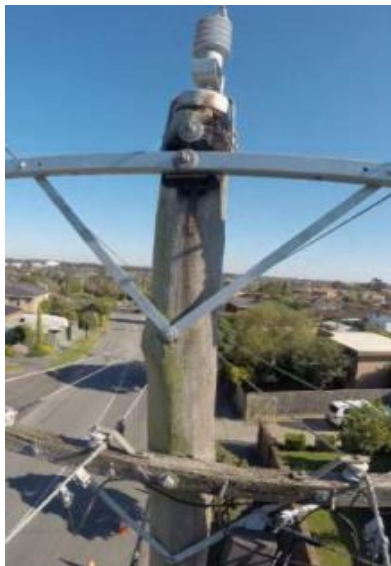
Regulation 28 reportable fire examples

It is important to note that where there is fire authority intervention, or molten / charred material was shed or dropped to the ground, the event must be classified as a fire reportable under R.28. It cannot be deemed a R.29 report nor deemed as 'not reportable'. This includes 'candled' HV fuses where there is evidence of charring and melting.

Crossarms



Pole-top



Fuse box

(Note LV fuse box melting and dropping material to the ground)



Insulated cable / dropper



Vegetation



Regulation 29 reportable incident examples

An R.29 reportable event is any event with evidence of charring, smouldering or melting where:

- The cross section of the asset material has been reduced (e.g. crossarm or pole)
- The external asset shape has been altered by the release of energy as evidenced by charring or melting and requires replacement (e.g. LV fuse cover)
- A third-party or non-network asset is affected in any of the above ways.

Note: Fire authority intervention, evidence of a fire, or where material is shed or dropped to the ground is considered R.28 reportable.

This includes 'hung up' or mal-operated HV fuses.

Fuse box



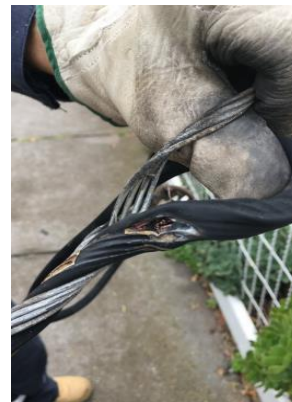
LV IPC connection



HV Dropper



Overhead service neutral





Reports not required – examples

Generally, in relation to connection faults, reporting is not required for faults where there is no evidence that energy or heat has escaped outside the asset (e.g. melting or charring that alters the external shape, as explained in the above R.29 reporting examples), and no evidence of material being shed or dropped to the ground. This includes HV fuses where they have operated as designed.

Crossarm



Vegetation contact ⁶



⁶ Brown, discoloured or dieback in vegetation where contact has been made and urgent pruning is required is not reportable as fire (but is under vegetation contact) unless fire authority attended, or it dropped or shed material to ground, or it burnt the ground, at which time it is reg.28 reportable.

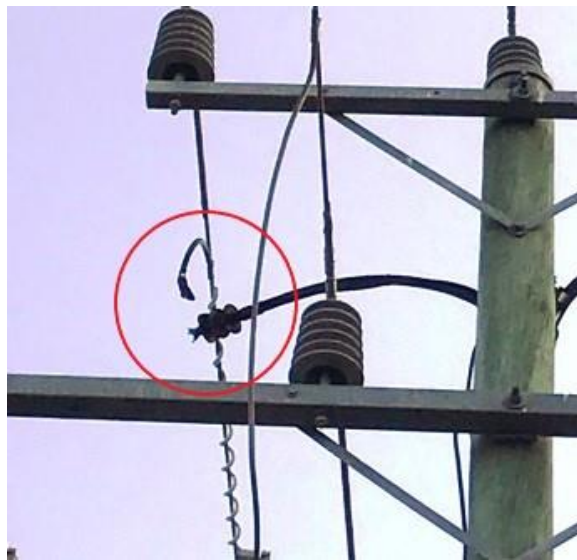
Fuse Box – Note not F-factor reportable as not occurring on the network



LV IPC connector



HV Dropper



Energy Safe Victoria

ABN 27 462 247 657

Head Office

Level 5, 4 Riverside Quay
Southbank VIC 3006

Postal address

PO Box 262
Collins Street West VIC 8007

Telephone 03 9203 9700
Email info@esv.vic.gov.au

www.esv.vic.gov.au