



**Electrical
Safety
Authority**

**Guideline
for
Section 12 of Ontario Regulation 22/04:
Electrical Distribution Safety
Reporting of Serious Electrical Incidents**

Version 4.1

Ontario Regulation 22/04

Electrical Distribution Safety

Revised – October 1, 2017

Guideline for Reporting of Serious Electrical Incidents

Legal Disclaimer

This document contains GUIDELINES ONLY to assist members of the industry in understanding roles and responsibilities under Ontario Regulation 22/04 - Electrical Distribution Safety under subsection 113(1) of Part VIII of the Electricity Act, 1998 S.O. 1998, c.15, sched.A. These Guidelines are intended for professional education and may be used for informational, non-commercial purposes only.

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The guidelines contained herein do not have the force of law. In the event of a conflict between these guidelines and any applicable legislation or regulation which may apply, the relevant law prevails.

Guideline for Reporting of Serious Electrical Incidents

General

1.1 Purpose

The purpose of this Guideline for Reporting of Serious Electrical Incidents (the “Guideline.”) is to clarify and interpret the requirements outlined in section 12 of Ontario Regulation 22/04 Electrical Distribution Safety” “Regulation 22/04”) to assist LDCs in achieving compliance with the Regulation.

This Guideline along with the Regulation, the Electricity Act, and applicable legislation and case law form the basis on which the ESA will assess the compliance with Ontario Regulation 22/04 Electrical Distribution Safety.

1.2 Definitions

1.2.1 “Authority” means the Electrical Safety Authority (“ESA”) (Regulation 22/04,s.1);

1.2.2 “barriered” means separated by clearances, burial, separations, spacings, insulation, fences, railings, enclosures, structures and other physical barriers, signage, markers or any combination of the above (Regulation 22/04, s1);

1.2.3 “contractor” means any person who performs work on electrical equipment or an electrical installation (Regulation 22/04, s.1);

1.2.4 “critical injury” means an injury of a serious nature that

- (a) places life in jeopardy,
- (b) produces unconsciousness,
- (c) results in a substantial loss of blood,
- (d) involves the fracture of a leg or arm but not a finger or toe,
- (e) involves the amputation of a leg, arm, hand or foot but not a finger or toe,
- (f) consists of burns to a major portion of the body, or
- (g) causes the loss of sight in an eye (Regulation 22/04, s.12(4));

1.2.5 “distribution line” or “line” means an electricity distribution line, transformers, plant or equipment used for conveying electricity at voltages of 50,000 volts or less (Regulation 22/04, s.1);

1.2.6 “distribution station” means an enclosed assemblage of equipment, including but not limited to switches, circuit breakers, buses and transformers, through which electrical energy is passed for the purpose of transforming one primary voltage to another primary voltage. (Regulation 22/04, s.1);

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- 1.2.7 “distribution system”** means a system for distributing electricity, and includes any structures equipment or other things used by a *LDC* for that purpose (Electricity Act, 1998 s.2);
- 1.2.8 “distributor”** means a person who owns or operates a *distribution system*. As this term is commonly referred to in the industry as a Local Distribution Company (“LDC”), for the purpose of this Guideline a “Distributor” as defined here will be referred to as either a “Distributor” or an “LDC”. (Electricity Act, 1998 s. 2(1))
- 1.2.9 “electrical equipment”** means any apparatus, appliance, device, instrument, fitting, fixture, machinery, material or thing used in or for, or capable of being used in or for, the distribution, supply or utilization of electrical power or energy, and, without restricting the generality of the foregoing, includes any assemblage or combination of materials or things which is used or capable of being used or adapted, to serve or perform any particular purpose of function when connected to an electrical installation, notwithstanding that any of such materials or things may be mechanical, metallic or non-electric in origin (Regulation 22/04, s.1);
- 1.2.10 “electrical installation”** means the installation, repair, replacement, alteration or extension of any wiring or electrical equipment that forms part of a distribution system (Regulation 22/04, s.1);
- 1.2.11 “Electricity Act”** means the *Electricity Act, 1998*, S.O. 1998, c.15. Sched. A;
- 1.2.12 “force majeure”** includes acts of God, lightning strikes, weather, floods, natural catastrophes, sabotages, riots, invasions, insurrection, acts of terrorism, but does not include labour strikes, fires or explosions (Regulation 22/04, s.12(4));
- * Definition for ‘force majeure’ added to Regulation 22/04 on October 1, 2017
- 1.2.13 “Legislation”** means all statutes duly enacted by the Legislative Assembly of Ontario or the Parliament of Canada as applicable, including regulations made under any such statute or statutes.
- 1.2.14 “live”** means electrically connected to a source of voltage difference or electrically charged so as to have a voltage different from that of the earth (Regulation 22/04, s.1);
- 1.2.15 “meter”** means any apparatus used for the purpose of making measurements of, or obtaining the basis of a charge for, electricity supplied to a purchaser (Regulation 22/04, s.12(4));

* Definition for ‘meter’ added to Regulation 22/04 on October 1, 2017

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- 1.2.16 “ownership demarcation point”** means the point,
(a) at which the LDC’s ownership of a *distribution system*, including connection assets, ends at the customer, and
(b) that is not located beyond,
i. the first set of terminals located on or in any building, or
ii. an electrical room or vault in a building where the electrical room or vault is of tamperproof construction, bears a sign to indicate that it is an electrical room or vault and is accessible only to authorized persons (Regulation 22/04, s.1);
- 1.2.17 “OEBA”** means the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Sched. B. (“OEBA”)
- 1.2.18 “OESC”** means the Ontario Electrical Safety Code incorporated by reference under Ontario Regulation 164/99.
- 1.2.19 “OHSA”** means the Occupational Health and Safety Act, R.S.O. 1990, c. O.1.
- 1.2.20 “primary distribution line”** means a *distribution line* conveying electricity at more than 750 volts but not more than 50,000 volts phase to phase; (Regulation 22/04, s.1);
- 1.2.21 “Regulation 22/04”** means Ontario Regulation 22/04 – Electrical Distribution Safety under *the Electricity Act, 1998*. For the purpose of this Guideline it will be referred to as Ontario Regulation 22/04 or the Regulation;
- 1.2.22 “secondary distribution line”** means an electricity *distribution line* conveying electricity at 750 volts or less phase to phase. (Regulation 22/04, s.1);
- 1.2.23 “serious electrical incident”** means:
a) any electrical contact that caused death or critical injury to a person,
b) any inadvertent contact with any part of a distribution system operating at 750 volts or above or with a meter, if the contact caused or had the potential to cause death or critical injury to a person, but not if the contact was caused by force majeure, or
c) any fire or explosion in any part of a distribution system operating at 750 volts or above or in a meter, if the fire or explosion, as the case may be, caused or had the potential to cause death or critical injury to a person, but not if it was caused by force majeure.
(Regulation 22/04, s.12(4)).

* Definition for ‘serious electrical incident’ was modified on October 1, 2017

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1.2.24 “worker” means a worker as defined in section 1 of the Occupational Health and Safety Act

* Definition for ‘worker’ was modified on October 1, 2017.

Other terminology used in this Guideline

Generally speaking, for the purposes of this Guideline:

- A ‘barrier’ is something such as a sign, fence, obstacle or clearance that prevents access to the *distribution system*.
- A ‘distribution system operating at 750 volts or above’ is all components of the distribution system (primary line, neutral, transformers, etc.), and includes the supporting structures (e.g. poles, guy wires).
- The term ‘energized’ has a meaning equivalent to the definition of *live*
- An ‘electrical contact’ is a contact that causes electric current to move through the human body and for Regulation 22/04 purposes shall be deemed to occur with the distribution system. An electrical contact includes, but is not limited to:
 - ✓ physical contact by a person to energized distribution system equipment; or
 - ✓ physical contact by a person through an object (e.g. ladder, tool, vehicle) to energized distribution system equipment; or
 - ✓ contact by a person through other means (e.g. air, water, ground) to energized distribution system equipment (e.g. arc flash, step/touch potential).
- A ‘member of the public’ is a person that is not defined as a *worker*

2.0 Reporting Serious Electrical Incidents

The purpose of this section of the Guideline is to provide guidance with respect to obligations to report serious electrical incidents in accordance with section 12 of Regulation 22/04 Electrical Distribution Safety but it not intended to be legal advice (See Legal Disclaimer of this Guideline).

2.1 General

2.1.1 What is required under Section 12 of *Regulation 22/04*?

Section 12 of *Regulation 22/04* requires that the *LDC*, or any *contractor* or operator acting on the *LDC*’s behalf, report to the ESA any *serious electrical incident* of which they become aware within 48 hours after the occurrence.

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2.1.2 What are the Guiding Principles for reporting serious electrical incidents?

ESA's mandate of electrical safety, among others, is to promote and undertake activities which enhance public electric safety including investigation, enforcement and other public electric safety services. Further, ESA's authorities under the administration of the Electricity Act, section 113 and its associated regulations encompass provisions related to people, property, and things in the interest of public safety.

ESA will review all electrical related fatalities and *critical injuries* where members of the public are involved. As part of ESA's processes (see section 2.1.4 below), ESA may contact the *LDC* to gather further information regarding the incident.

2.1.3 Will ESA ask the LDC to assist in reviewing the reported incident?

Section 12(3.1) of the Regulation states 'Upon request of the Authority, the *distributor* or any *contractor* or operator acting on the *distributor's* behalf shall assist in an investigation under Part VIII of the Act into a *serious electrical incident* that involved the *distributor's* assets.' O. Reg. 220/17, s. 3 (2).

ESA may request information, and in some cases assistance, with the review of an incident reported to ESA. ESA deems assistance to include providing ESA with information that is available to the *distributor*, or any *contractor* or operator acting on the *distributor's* behalf. ESA also deems that clause 12(3.1) of the Regulation only applies to the *distributor's* assets.

* Section 12(3.1) was added to Regulation 22/04 on October 1, 2017

2.1.4 What does ESA do with information gathered through a review?

ESA uses this information to pursue two main goals:

1. Analyze the data to identify industry-wide trends and develop programs to enhance public electrical safety; and
2. Determine if there is a need to review an *LDC's* compliance with Ontario Regulation 22/04.

Note: Information gathered related to mandatory reportable serious electrical incidents is also reported in aggregate form for each *LDC* on the Distributor Scorecard.

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2.2 Reporting Incidents

2.2.1 Who is Required to Report?

Under section 12 of the Regulation, the persons responsible for reporting are *distributors* (referred to as LDCs in this Guideline), and *contractors* and operators acting on behalf of the *distributor/LDC*.

To clarify in this regard, for the purpose of reporting obligations under section 12 of the Regulation it is noted that:

- A “*distributor*” (referred to as an LDC in this Guideline) is defined in s. 2(1) of the Electricity Act (and section 1.2 of the Guideline) as a person who owns or operates a *distribution system*.
- The term “*contractor*” is defined in Regulation 22/04 (and section 1.2 of the Guideline) as any person who performs work on *electrical equipment* or an *electrical installation* (Regulation.22/04, s.1);

2.2.2 When must incidents be reported to ESA?

Serious electrical incidents must be reported within 48 real hours of the LDC becoming aware of the incident.

The 48 hour reporting window is deemed to begin when the LDC realizes that the incident was a serious electrical incident. (e.g. it is discovered that a house fire that occurred due to the improper meter function, but this was only determined one week later, after removing the meter remains and examining it).

2.2.3 What do I report to ESA?

The information that is to be reported is set out in the Electrical Distribution Serious Electrical Incident Reporting form (“the Reporting Form”) that is set out at Appendix A, which includes, but is not limited to, the following details:

When: The time & date of incident and the report submissions date

Where: Location of incident, including the address or street intersection, and directions

What: Incident description and other relevant information

Who: Person reporting the incident, e.g. Name and phone number

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2.2.4 How can an incident be reported to ESA?

Information regarding incidents can be sent to ESA Customer Service Centre by telephone, fax or email.

Telephone: 1-877-372-7233 (1-877- ESA-SAFE)

Fax: 1-800-667-4278

Email: esa.cambridge@electricalsafety.on.ca

2.2.5 What is mandatory reporting versus voluntary reporting?

It is mandatory for an *LDC* to report a *serious electrical incident* that falls within the parameters of the definition of a *serious electrical incident*. (see Guideline s. 2.3.6 for further clarification)

LDCs are encouraged to voluntarily report other incidents involving the *distribution system* that do not fall into the reportable incident definition. Information gained through voluntary reports will help ESA explore issues to determine whether there are other trends or safety concerns emerging, including but not limited to some types of equipment failures or non-LDC workers encroaching on *live* distribution equipment. Voluntary reports are not included in the statistics reported on the LDC Scorecard.

If the *LDC* is unsure whether the incident is mandatory to report, it is recommended to first report it to ESA within the 48 hour window to remain in compliance with the Regulation, and secondly follow up with ESA to discuss the incident details further in order to confirm if it is in fact classified as a mandatory or a voluntary report by ESA.

2.3 How is a Serious Electrical Incident defined?

2.3.1 Serious electrical incident means:

- (a) any electrical contact that caused death or *critical injury* to a person,
- (b) any inadvertent contact with any part of a distribution system operating at 750 volts or above or with a meter, if the contact caused or had the potential to cause death or critical injury to a person, but not if the contact was caused by force majeure, or
- (c) any fire or explosion in any part of a distribution system operating at 750 volts or above or in a meter, if the fire or explosion, as the case may be, caused or had the potential to cause death or critical injury to a person, but not if it was caused by force majeure.
[Regulation 22/04, s.12(4)].

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2.3.2 What is meant by inadvertent contact?

For the purposes of section (b) the definition of “*serious electrical incident*” and this Guideline, ‘inadvertent contact’ is any unintentional contact by a person or thing with any part of a distribution system operating at or above 750V.

2.3.3 What is meant by the ‘potential to cause death or *critical injury*’?

This is when harm to a person through death or *critical injury* becomes a real possibility. (For example, the risk of human exposure when *distribution system* equipment that was *barriered* is exposed to possible electrical contact due to the removal or compromise of the safety barriers designed to keep the public safe) It means that a person could be critically injured or die and does not depend on probability.

2.3.4 What is the precautionary principle?

For the purpose of Regulation 22/04 *serious electrical incident* reporting, where it proves impossible to determine with certainty when reviewing for the existence of the potential to cause death or *critical injury*, but the likelihood of real harm to public safety exists, **ESA deems this a reportable incident.**

The precautionary principle (or precautionary approach) to risk management states that if an incident has a suspected risk of causing harm to the public, in the absence of scientific consensus (that the incident is not harmful), the burden of proof that it is not harmful falls on the *LDC*.

The principle implies that there is a social responsibility to protect the public from exposure to harm, when scientific investigation has found a plausible risk. These protections can be relaxed only if further scientific findings emerge that provide sound evidence that no harm will result.

2.3.5 What types of incidents involving a *meter* need to be reported?

An incident involving a *meter* that causes or has the potential to cause death or *critical injury* is a mandatory reportable *serious electrical incident*.

2.3.5.1 Any inadvertent contact with a *meter* that caused or had the potential to cause death or *critical injury* is reportable to ESA.

This is not expected to be a common occurrence, even when applying the precautionary principle. *LDCs* are expected to assess an incident and determine if the incident is mandatory reportable (i.e. determine if the potential for death or *critical injury* existed).

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2.3.5.2 Any occurrence of a fire or explosion in a *meter* that caused or had the potential to cause death or *critical injury* is reportable to ESA.

In the case of fire or explosion, applying the precautionary principle may require determining the potential to cause death or *critical injury* and includes an assessment of whether the equipment failed in a safe manner. For example, if arcing occurs inside the *meter*, did the *meter's* enclosure prevent a fire from escaping the enclosure?

In some cases the *LDC* may not be able to determine, within the 48 hour reporting window, if the fire or explosion occurred in the *meter*, or in customer-owned equipment (e.g. meter-base). In these cases, ESA recommends that the *LDC* report the incident when it becomes aware of it to remain in compliance with the Regulation, and follow-up with ESA with any additional information to determine if the incident is classified as mandatory or voluntary.

During ESA's review of an incident, if the cause of the fire or explosion cannot be determined, the incident will be deemed a voluntary report by ESA.

2.3.6 What is a mandatory reportable *Serious Electrical Incident*?

A mandatory reportable *serious electrical incident* is:

- i. Any incident involving a member of the public where a death or *critical injury* occurs as a result of an electrical contact with a *distribution system*. The incident is reportable to ESA, **regardless** of the voltage level of the equipment involved. [Regulation, 22/04, s. 12(4)(a)]
or
- ii. Any inadvertent contact with *distribution system* equipment operating at 750 volts or above or with a *meter* that causes a death or *critical injury* or creates a direct or subsequent hazard with the potential for death or *critical injury* due to human exposure to *live distribution system* equipment by removing or defeating the barriers unless the contact was caused by *force majeure*. [Regulation 22/04, s. 12(4)(b)]
or
- iii. Any fire or explosion in any part of the *distribution system* operating at 750 volts or above or in a *meter*, that causes a death or *critical injury* or creates a direct or subsequent hazard with the potential for death or *critical injury* (e.g. removal of barriers, fire, flying or falling debris) unless the fire or explosion was caused by *force majeure*. [Regulation 22/04, s. 12(4)(c)]

See Appendix B for examples of reportable *Serious Electrical Incidents*.

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2.3.7 Do incidents involving *workers* or worker equipment need to be reported?

Under section 12(3) of Regulation 22/04, LDCs are exempt from the requirement to report to ESA if:

- a) The incident only involves workers;
- b) The incident has been reported to the Ministry of Labour as required under the OHSA; and
- c) The Ministry of Labour has taken control of the scene of the incident

NOTE: ESA ENCOURAGES THESE TYPES OF INCIDENTS TO BE REPORTED TO ESA ON A VOLUNTARY BASIS.

Incidents that involve *workers* and members of the public are reportable to ESA, in addition to any other reporting obligations, including but not limited to those prescribed by the OHSA and reportable to the Ministry of Labour.

Incidents caused by a worker or worker equipment that create a hazard by removing barriers or exposing members of the public to *live* distribution system equipment are reportable to ESA.

2.3.8 What types of incidents do not need to be reported?

Generally, incidents that do not cause a death or *critical injury* or that do not create a safety hazard with the potential to cause death or *critical injury* do not need to be reported.

The following are examples of types of incidents that do not need to be reported.

- Routine operation of protective devices
- Vegetation, flying debris (e.g. garbage) or animal/bird contacts where the *distribution system* barriers are not compromised
- Equipment failures where the equipment fails in a safe manner
- Incidents created by customer-owned equipment (e.g. meter base, customer-owned conductor, etc.)
- *Worker* only incidents (see 2.3.7 of this Guideline)
- Motor vehicle accidents if distribution system equipment remains safely *barriered* (e.g. Electrical distribution equipment not accessible to members of the public).
- *Force Majeure* events (see 2.3.11 of this Guideline)

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2.3.9 Is a death or *critical injury* from ‘electrical contact’ that occurs as a result of *force majeure* a mandatory reportable incident?

Yes, it is mandatory reportable. Part (a) of the *Serious Electrical Incident* definition states “any electrical contact that caused death or *critical injury* to a person”, therefore any death or *critical injury* that occurs as a result of electrical contact with the *distribution system* is mandatory to report, regardless of the circumstances.

Force majeure is not intended to exempt the reporting of all incidents. It is intended to provide relief from reporting incidents of non-harmful electrical contacts, inadvertent contacts, fires or explosions. As a result, this provides reporting relief to LDC’s to redirect their resources where they are best focused on repairing the distribution system.

2.3.10 What types of ‘weather’ are deemed to be *force majeure*?

ESA deems the term ‘weather’ in the *force majeure* definition to mean extreme weather events. Extreme weather events include **unexpected, unusual, unpredictable, or severe** weather.

Such events disrupt normal business operations and occur so infrequently that it would be uneconomical to take them into account when designing and operating the *distribution system*.

2.3.11 What types of incidents caused by *force majeure* do not need to be reported?

Any inadvertent contact, fire or explosion involving a distribution system operating at 750 volts or above that occurs as a result of a *force majeure* event does not need to be reported.

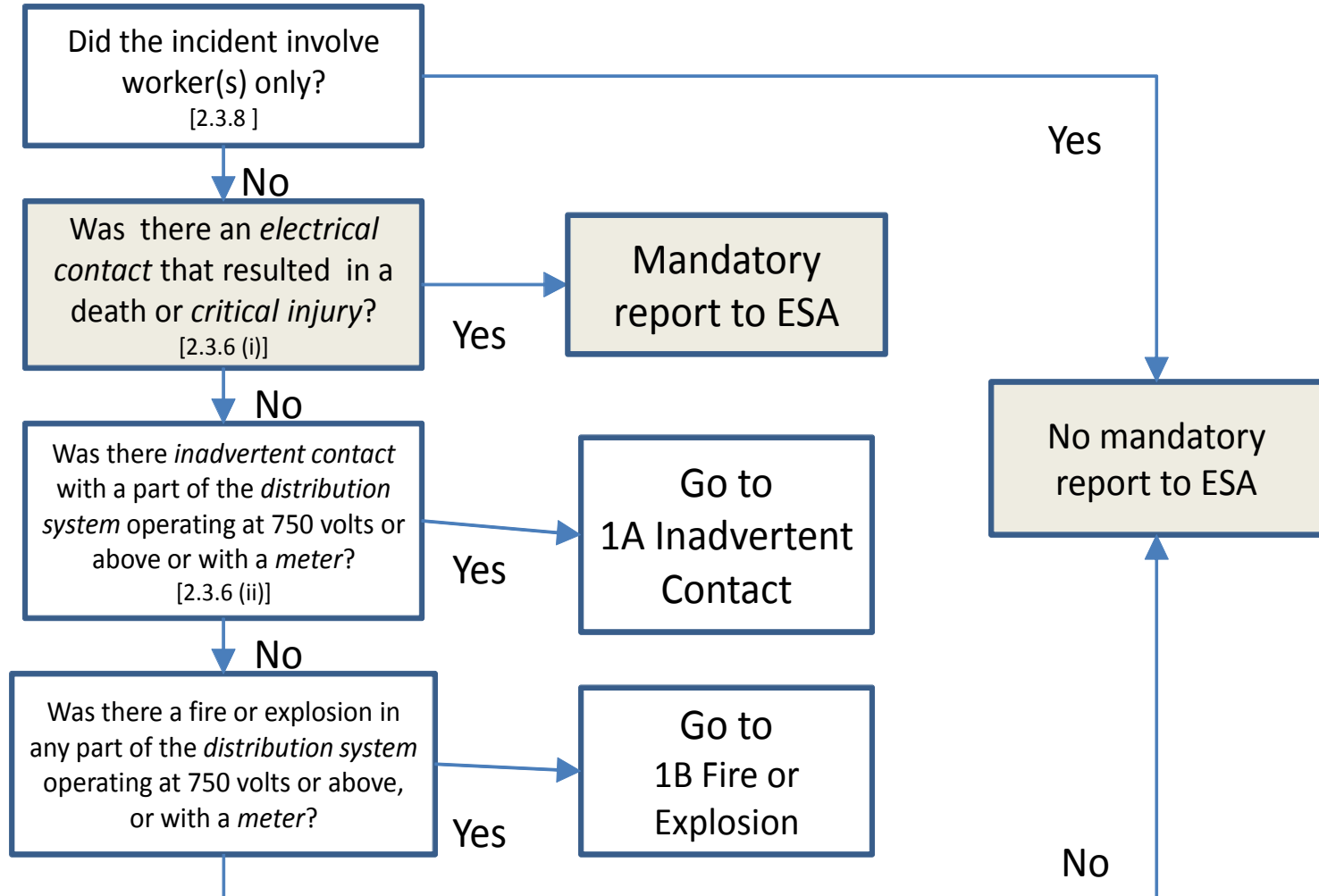
The following are examples of types of *force majeure* incidents that do not need to be reported. Generally, they do not need to be reported if no *critical injury* or death occurs due to an electrical contact.

- A tree or tree branch falls due to force majeure and causes an overhead line to fall to the ground or hang lower beyond the acceptable CSA clearances.
- High winds or ice build-up cause an overhead line to fall to the ground or hang lower beyond the acceptable CSA clearances.
- A natural catastrophe (e.g. forest fire, severe river flooding) causes part of a pole line to collapse

LDCs are expected to make a reasoned decision for not reporting a *serious electrical incident* under these circumstances and provide that rational to ESA upon request. Failure to provide this information may result in the LDC being found not compliant with section 12.

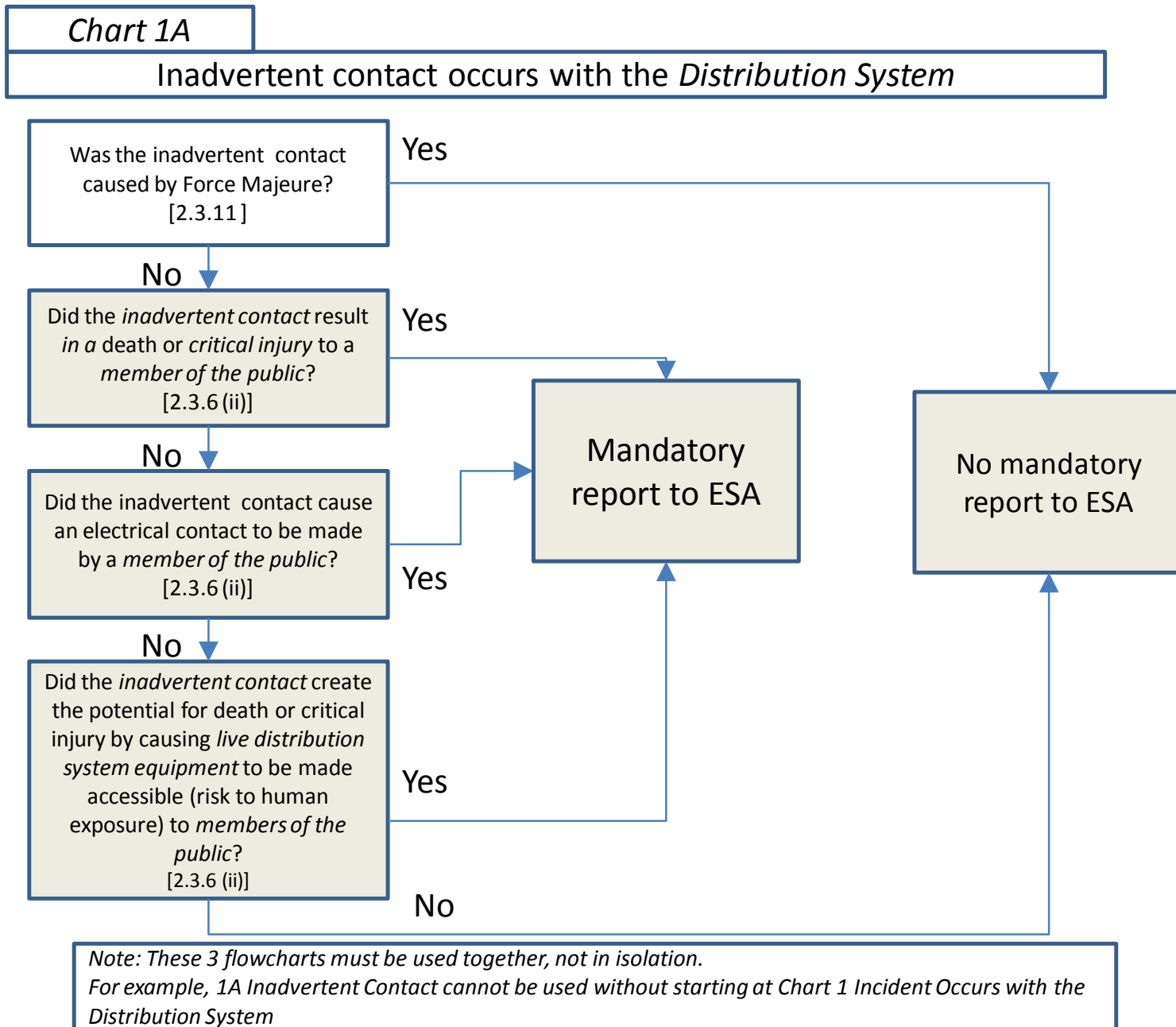
Chart 1

Incident occurs with the *Distribution System*

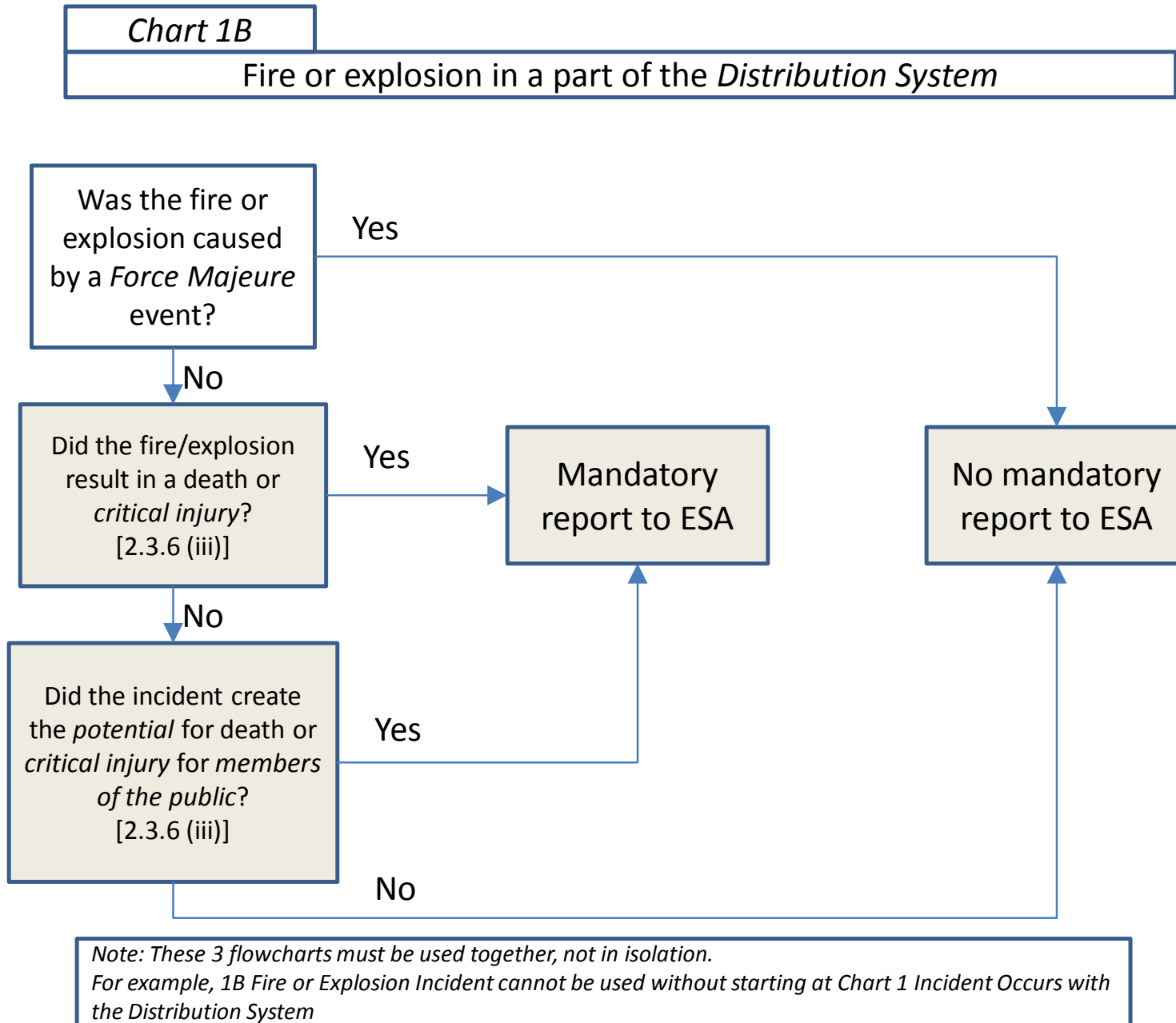


Note: These 3 flowcharts must be used together, not in isolation. For example, 1A Inadvertent Contact cannot be used without starting at Chart 1 Incident Occurs with the Distribution System

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Electrical Distribution Serious Electrical Incident Reporting Form

Call: 1-877-ESA-SAFE (1-877-372-7233) or Fax: 1-800-667-4278 or email: esa.cambridge@electricalsafety.on.ca

Section A: Reporting Information

Callers Name _____ Phone Number _____

Agency caller is representing _____

Location of incident _____ City _____

Date of incident _____ Time of incident _____

Other Authorities Involved _____

MOL Fire Department Other: Please specify

Police

Caution: The Electrical Safety Authority does not report incidents involving workers to the Ministry of Labour. Therefore, reporting to ESA does not alleviate any obligations to report incidents to the Ministry of Labour under the OHS Act.

Section B: Nature of Incident

	<u>Yes</u>	<u>No</u>
Should ESA consider this to be a voluntary report? ** (Please provide details in Section D as to why it should be considered voluntary)	<input type="checkbox"/>	<input type="checkbox"/>
Was there an electrical contact that caused death or critical injury to a person?	<input type="checkbox"/>	<input type="checkbox"/>
Was there an inadvertent contact with any part of a distribution system operating at 750 volts or above that caused or had the potential to cause death or critical injury to a person?	<input type="checkbox"/>	<input type="checkbox"/>
Was there a fire or explosion in any part of a distribution system operating at 750 volts or above that caused or had the potential to cause death or critical injury to a person, except a fire or explosion caused by lightning strike?	<input type="checkbox"/>	<input type="checkbox"/>
Was the electrical equipment owned by the licensed distributor? (If not please provide more information in Section D)	<input type="checkbox"/>	<input type="checkbox"/>
Was the incident a result of an inadvertent contact with a meter, or fire or explosion in a meter?	<input type="checkbox"/>	<input type="checkbox"/>

** Voluntary reports are submitted to ESA for information purposes only.

Users may refer to ESA’s Guideline for Reporting of Serious Electrical Incidents for more information about the reporting requirements under the Regulation.

By submitting personal information to the Electrical Safety Authority, or its agents and service providers, you agree that ESA may collect, use and disclose such personal information in accordance with its privacy policy, applicable laws or pursuant to its administrative agreement with the Province of Ontario. If you provide us with the personal information on behalf of another individual, you represent that you have all necessary authority and/or have obtained all necessary consents from such individual to enable us to collect, use and disclose such personal information for the purposes set forth in our Privacy Policy. A copy of our policy is located on our website at www.esasafe.com

Section C: Information gathering (if available):

Name of person involved: _____

Contact number: _____

Address: _____

Injury:

Yes No

Type of injury (if any) _____

If incident is worker initiated please provide employer information. _____

Site information

Electrical contact with:

Underground Overhead Submarine Substation

Locates requested? Yes No

Accurate Locate? Yes No

Excavated inside locate area? Yes No

Voltage (line to ground)? _____

Weather? _____

Section D: Provide details of incident (Please attach a sketch and/or photo of incident (if available)):

By submitting personal information to the Electrical Safety Authority, or its agents and service providers, you agree that ESA may collect, use and disclose such personal information in accordance with its privacy policy, applicable laws or pursuant to its administrative agreement with the Province of Ontario. If you provide us with the personal information on behalf of another individual, you represent that you have all necessary authority and/or have obtained all necessary consents from such individual to enable us to collect, use and disclose such personal information for the purposes set forth in our Privacy Policy. A copy of our policy is located on our website at www.esasafe.com

Examples of Reportable Incidents

	DESCRIPTION OF INCIDENT	RATIONAL FOR REQUIREMENT TO REPORT (reference to Guideline section)
1	<p>A tree falls and contacts an overhead primary line resulting in a line falling to the ground. REPORTABLE.</p>	<p>Inadvertent contact with equipment operating >750 volts. The downed line has the potential to cause death or critical injury to a member of the public. The normal barriers (clearance through height) have been removed. (See Guideline s.2.3.6(ii))</p>
2	<p>A car hits a distribution system pole:</p> <p>a) No damage to the distribution system; however the driver suffers critical injuries from the trauma. NOT REPORTABLE</p> <p>b) The pole breaks and causes the overhead primary line to fall to the ground. REPORTABLE</p> <p>c) The pole breaks and causes the overhead primary line to fall to the ground. The upstream protection operates; however reclose operations occur. REPORTABLE</p> <p>d) The pole breaks and causes the overhead primary line to fall to the ground. The upstream protection operates and there <u>are no</u> reclose operations. REPORTABLE</p>	<p>a) The inadvertent contact with live distribution equipment operating at more than 750 volts occurred but there is no potential for death or critical injury due to electrical contact as all barriers remained in place. Although critical injuries occurred, they were not as a result of an electrical contact. (Information regarding traffic fatalities can be collected from another Regulator) (See Guideline s.2.3.8)</p> <p>b) The inadvertent contact with a distribution system operating at more than 750 volts creates the potential for death or critical injury due to electrical contact. There is potential for critical injury or death because the falling equipment was live and unbarriered prior to the protection system operating. There is also a potential for critical injury from being struck by the falling equipment. (See Guideline s. s.2.3.6(ii))</p> <p>c) The inadvertent contact with a distribution system operating at more than 750 volts occurred, and there is potential for critical injury or death due to the reclose operation. (See Guideline s.2.3.6(ii))</p> <p>d) The inadvertent contact with a distribution system operating at more than 750 volts occurred, and there is potential for critical injury or death because the falling equipment was live and unbarriered prior to the protection system operating. There is also a potential for a non-electrical critical injury from being struck by the falling equipment. (See Guideline s.2.3.6(ii))</p>

<p>3</p>	<p>A dump truck contacts the neutral of an overhead primary distribution system while raising the bed of the truck.</p> <p>a) The truck bed rising is stopped and lowered before any damage occurs. Not Reportable</p> <p>b) The dump truck is driven away while still in contact with the neutral, causing the neutral line to break and fall to the ground. A person grabs the hanging pieces of the neutral and an electrical contact occurs that causes a critical injury. Reportable</p> <p>c) The dump truck is driven away while still in contact with the neutral, causing the neutral line to fall to the ground but does not break. No one touches the fallen neutral. Not Reportable</p> <p>d) The dump truck is driven away while still in contact with the neutral, causing a pole to break and the primary line to fall to the ground. Reportable</p>	<p>a) The inadvertent contact with a distribution system operating at more than 750 volts occurred; however no barriers were compromised, therefore no potential for death or critical injury was present. (See Guideline s.2.3.8)</p> <p>b) The inadvertent contact with a distribution system operating at more than 750 volts caused a critical injury. (See Guideline s.2.3.6 (ii))</p> <p>c) The inadvertent contact with a distribution system operating at more than 750 volts occurred; however no death or critical injury occurred and there is no potential for death or critical injury.</p> <p>d) The inadvertent contact with a distribution system operating at more than 750 volts occurred, and there is potential for critical injury or death. (See Guideline s.2.3.6 (ii))</p>
<p>4</p>	<p>An explosion occurs in LDC owned distribution equipment inside a customer-owned chamber (vault) located adjacent to a public parking lot.</p> <p>a) The resulting explosion causes the door of the chamber to be ejected across the parking lot. REPORTABLE.</p> <p>b) The resulting explosion is completely contained within the chamber. NOT REPORTABLE</p>	<p>a) Although the chamber was customer-owned, it does not absolve the LDC of reporting the incident that occurred involving its distribution equipment. The parking lot was accessible by members of the public that may be critically injured as a result of flying debris. (See Guideline s.2.3.6(iii))</p> <p>b) There is no potential for death or critical injury. This type of incident is encouraged to be reported to ESA as a voluntary report.</p>

<p>5</p>	<p>An overhead line connector fails and the line falls to the ground. REPORTABLE.</p>	<p>The line falling to the ground caused an inadvertent contact with the ground and created a hazard with the potential to cause death or critical injury. (See Guideline s.2.3.6 (ii))</p>
<p>6</p>	<p>A crane on a construction site next to a publicly accessible street contacts an overhead primary line. a) The line falls outside of the construction site, onto the sidewalk. REPORTABLE b) The line falls into the construction site. NOT REPORTABLE</p>	<p>a) The distribution equipment experienced an <i>inadvertent contact</i> which knocked it outside of the barriered area and exposed members of the public to the potential for death or a critically injury. (See Guideline s.2.3.6(ii)) b) The distribution equipment experienced an inadvertent contact which knocked it down into an area that was controlled by barriers and was not readily accessible to the public. (See Guideline s.2.3.7 & s.2.3.8)</p>
<p>7</p>	<p>A contractor contacts an underground primary line while excavating. a) The line was damaged, but there was no explosion or fire. NOT REPORTABLE b) As a result of the contact, a fault causes an explosion in the distribution system and a nearby manhole cover is thrown into the air and lands on a part of the sidewalk that is not barriered. REPORTABLE</p>	<p>a) No potential for death or critical injury. (See Guideline s.2.3.7 & s.2.3.8) This type of incident is encouraged to be reported to ESA as a voluntary report. b) An explosion in the distribution system caused the potential for death or critical injury as a result of the flying manhole cover falling into an area accessible to members of the public. (See Guideline s.2.3.6(iii))</p>
<p>8</p>	<p>While unloading a delivery from a flatbed truck in a residential neighborhood, a crane contacts an overhead primary line. The operator stops the crane while still in contact with the line and is electrocuted while exiting the crane. a) There were no barriers to the crane on the sidewalk. REPORTABLE b) The operator had set up pylons on the sidewalk to provide a barrier to the crane. NOT REPORTABLE</p>	<p>a) The crane is accessible to members of the public so there is the potential for death or critical injury if someone touches the crane while it is still contacting the energized line. (See Guideline s.2.3.7) b) Visual barriers were provided (and not defeated) which alerts members of the public to the work zone and potential for danger. (See Guideline s.2.3.8) This type of incident is encouraged to be reported to ESA as a voluntary report.</p>

<p>9</p>	<p>A utility transformer fails catastrophically in an underground chamber (vault). The result is flames erupting out of a grate located in a city sidewalk. REPORTABLE.</p>	<p>A fire in the <i>distribution system</i> caused the potential for death or critical injury as a result of the fire/explosion created by a fault in the <i>distribution system</i>. (See Guideline s.2.3.6(iii))</p>
<p>10</p>	<p>a) A summer storm (not a <i>force majeure</i> event) causes some tree limbs to break and bring an overhead primary line to the ground. REPORTABLE</p> <p>b) A severe ice storm (<i>force majeure</i> - event) causes some tree limbs to break and bring an overhead primary line to the ground. NOT REPORTABLE</p> <p>c) A severe ice storm (<i>force majeure</i> - event) causes some tree limbs to break and bring an overhead primary line to the ground. While walking his dog, a person steps on or near the downed line and experiences an electrical contact that kills him. REPORTABLE</p> <p>d) A severe ice storm (<i>force majeure</i> - extreme weather event) causes some tree limbs to break and bring an overhead primary line to the ground. While walking his dog, a person steps on or near the downed line and experiences an electrical contact, but was not injured. NOT REPORTABLE</p>	<p>a) An inadvertent contact occurred and caused the potential for death or critical injury. (See Guideline s.2.3.6 (ii))</p> <p>b) The inadvertent contact by the tree was caused by <i>force majeure</i>. (See Guideline s.2.3.11)</p> <p>c) A member of the public suffered an electrical contact that resulted in death. (See Guideline s 2.3.3 (ii) & s.2.3.11)</p> <p>d) The inadvertent contact by the tree and subsequent electrical contact were caused by <i>force majeure</i>. (See Guideline s.2.3.11)</p>
<p>11</p>	<p>a) Balloons from a party are released and became tangled up in the overhead primary line. NOT REPORTABLE</p> <p>b) A person grabs a wire tether attached to the balloons and receives a electrical contact. (tingle, shock, critical injury or death). REPORTABLE</p>	<p>a) There was no inadvertent contact that caused or had potential to cause death or critical injury. (See Guideline s.2.3.8)</p> <p>b) A member of the public suffered an electrical contact with potential for death or critical injury. (See Guideline s. 2.3.6(ii))</p>

<p>12</p>	<p>A squirrel running along an overhead primary line spans the gap and causes an arc resulting in a fault in the line. NOT REPORTABLE</p>	<p>There was no inadvertent contact that caused or had potential to cause death or critical injury. (See Guideline s.2.3.8)</p>
<p>13</p>	<p>a) A person receives a tingle voltage contact, where the tingle voltage originates from the distribution system operating at <750 volts. NOT REPORTABLE</p> <p>b) A person receives a tingle voltage contact, where the tingle voltage originates from the distribution system operating at >750 volts due to a line on the ground. REPORTABLE</p> <p>c) A person receives a tingle voltage contact, where the tingle voltage originates from the distribution system operating at >750V due to a tree leaning on an overhead line. NOT REPORTABLE</p>	<p>a) A member of the public suffered an inadvertent contact with live distribution equipment operating at less than 750 volts. This type of incident is encouraged to be reported to ESA as a voluntary report. (See Guideline s.2.3.8)</p> <p>b) The inadvertent contact of the line on the ground caused a member of the public to suffer an inadvertent contact with live distribution equipment operating at 750 volts or above that had the potential to cause death or critical injury. (See Guideline s.2.3.6(ii))</p> <p>c) A member of the public suffered an inadvertent contact with live distribution equipment operating at more than 750 volts, however there was no potential for critical injury or death. This type of incident is encouraged to be reported to ESA as a voluntary report.</p>

<p>14</p>	<p>A pad-mount transformer is hit by a car:</p> <p>a) The transformer remains on its foundation and no energized parts exposed. NOT REPORTABLE</p> <p>b) The transformer is knocked off its foundation. The upstream protection does not operate. REPORTABLE</p> <p>c) The transformer is hit by a car and is knocked off its foundation. The upstream protection operates; however reclose operations occur. REPORTABLE</p> <p>d) The transformer is hit by a car and is knocked off its foundation. The upstream protection operates and there <u>are no</u> reclose operations. NOT REPORTABLE</p>	<p>a) The inadvertent contact with a distribution system operating at more than 750 volts occurred but there is no potential for death or critical injury due to electrical contact as all barriers remained in place. (See Guideline s.2.3.8)</p> <p>b) The inadvertent contact with a distribution system operating at more than 750 volts occurred, and there is potential for critical injury or death. (See Guideline s.2.3.6(ii))</p> <p>c) The inadvertent contact with a distribution system operating at more than 750 volts occurred, and there was potential for critical injury or death due to the reclose operation. (See Guideline s.2.3.6(ii))</p> <p>d) The inadvertent contact with a distribution system operating at more than 750 volts occurred, however it is assumed that the protection operated before any energized equipment would become unbarriered, so there was no potential for critical injury or death due to electrical contact. (See Guideline s.2.3.8)</p>
<p>15</p>	<p>a) Arcing in a <i>meter</i> causes a fire which subsequently causes the siding on a house to catch fire. REPORTABLE</p> <p>b) After a meter was removed from service, arcing is discovered in the <i>meter</i>. The LDC determined that the arcing was completely contained within the chamber. NOT REPORTABLE</p> <p>c) A fire in the electrical panel of a house causes the house to burn down, destroying the <i>meter</i>. NOT REPORTABLE</p> <p>d) Damaged meter-base jaws caused a high resistance connection resulting in the failure of the <i>meter</i>. NOT REPORTABLE</p> <p>e) A fire occurs in the vicinity of the meter. After examining the meter, it cannot be determined if the fire started in the meter or meter-base. Recommend to Report</p>	<p>a) The fire in the <i>meter</i> caused a fire that had the potential to cause death or critical injury. (See Guideline s.2.3.5)</p> <p>b) The arcing did not generate a fire or explosion nor was there a probability of either occurring. This type of incident is encouraged to be reported to ESA as a voluntary report. (See Guideline s.2.3.5)</p> <p>c) The fire did not originate in the meter or the distribution system operating above 750V. (See Guideline s.2.3.8)</p> <p>d) There was no fire or explosion originating in the meter or in the distribution system. (See Guideline s.2.3.8)</p> <p>e) Since it cannot be determined conclusively where the fire started, ESA recommends that the incident be reported as voluntary. (See Guideline s.2.3.5.2)</p>