



# Guideline for Disconnecting Unused Lines

**Ontario Regulation 22/04  
Electrical Distribution Safety  
October 5, 2005**

**Legal Disclaimer.**

**This document contains GUIDELINES ONLY to assist members of the industry in interpreting Ontario Regulation 22/04 - Electrical Distribution Safety - made under subsection 113(1) of Part VIII of the Electricity Act, 1998. These guidelines do not have the force of law. Where there is a conflict between these guidelines and any legislation or regulation which may apply, the relevant law prevails.**

**Retention Periods stated in the guidelines set out the minimum period for which referenced documents are to be retained. Each distributor needs to make its own assessment of the appropriate retention period for specific documents based on its assessment of risk factors and potential liability.**



## 1.0 General

### 1.1 Purpose of Guideline.

This Guideline has been prepared to provide guidance to distributors on how to comply with section 11 Disconnection of Unused Lines of Ontario Regulation 22/04 *Electrical Distribution Safety*.

This Guideline is to be read in conjunction with Regulation 22/04. As a condition to using its distribution systems, each distributor will need to submit to the Electrical Safety Authority (ESA) a Statement of Compliance on an annual basis to demonstrate compliance with sections 3, 9,10,11 and 12 of the Regulation. This Guideline along with the Regulation and other appropriate standards form the basis on which the ESA will assess the safety of the electrical installations within the Province of Ontario.

### 1.2 Definitions

These definitions are provided solely for the application of Ontario Regulation 22/04 and should not be used in the interpretation or application of other regulations.

1.2.1 “**Unused Lines**” means lines that are not required as an integral part of the distribution system.

1.2.2 “**Prolonged Period of Time**” means twelve months from when the distribution line has been deemed “unused” by the distributor.

1.2.3 “**Ground**” means “permanently connected to earth through a ground connection of sufficiently low impedance and having sufficient current-carrying capacity to prevent the building up of voltages that may result in undue hazard to persons or in the case of underground distribution lines may mean cut-off such that they can not be inadvertently energized.

### 1.3 Scope of Section 11

1.3.1 What is the timeline for complying with section 11?

Section 11 came into force on November 11, 2004. This means that all distribution systems have been required to comply with section 11 of the Regulation since November 11, 2004. This timeline applies only to lines that have been declared “*unused*”



since November 11, 2004.

1.3.2 What parts of the distribution system does section 11 cover?

Section 11 covers all distribution lines of 750 volts or more, including both overhead and underground lines.

1.3.3 What does section 11 require?

Section 11 requires that all distribution lines of 750 volts or more that are *unused* for a *prolonged period of time* be de-energized, disconnected and *grounded*.

1.3.4 Does this include 'back-up' and 'emergency' lines?

No, back-up and emergency lines are exempt from section 11.

Section 11(3) states that:

"A distributor is not required to comply with subsection (1) where the lines, although *unused*, act as back-up or emergency lines."

1.3.5 What options are available if it does not make sense to disconnect and ground?

If a distributor feels that it cannot or it does not make sense to disconnect and ground *unused* distribution lines then it can follow section 11(4) of the Regulation. This allows the distributor to provide ESA with a report stating that disconnecting and grounding are not practical under the circumstances, and there is no undue danger to the safety of any persons if the lines are not disconnected and grounded. A professional engineer must sign the report. (A sample report is illustrated in Appendix A.)

1.3.6 What information should this report include?

Some of the information to be included in the report is as follows:

- 1.3.6.1 The location of the unused lines;
- 1.3.6.2 The reason why it is not practical to remove or disconnect and ground the lines;
- 1.3.6.3 Professional engineer's signature



## 2.0 How to Comply with Section 11.

### 2.1 How do I disconnect and ground?

2.1.1 There are too many ways to disconnect and ground to list all of the methods here. Instead, a general principle statement has been prepared to guide the distributors. Each distributor should ensure that their process measures up to the principle statement below.

**”Grounding (or cut-off for underground cable) must be sufficient to provide permanent protection to prevent the building up or transference of any voltages or currents that may result in any undue hazards to persons or equipment.”**

2.1.2 Below are some situations that should be considered when a line might become inadvertently energized.

2.1.2.1 Induction

2.1.2.2 Capacitive coupling

2.1.2.3 Inadvertent connection or fault from the adjacent energized system

2.1.3 What process should be followed to comply with Section 11?

The following is a high level overview of the process to comply with Section 11:

2.1.3.1 Identify unused lines

2.1.3.2 Recover; or

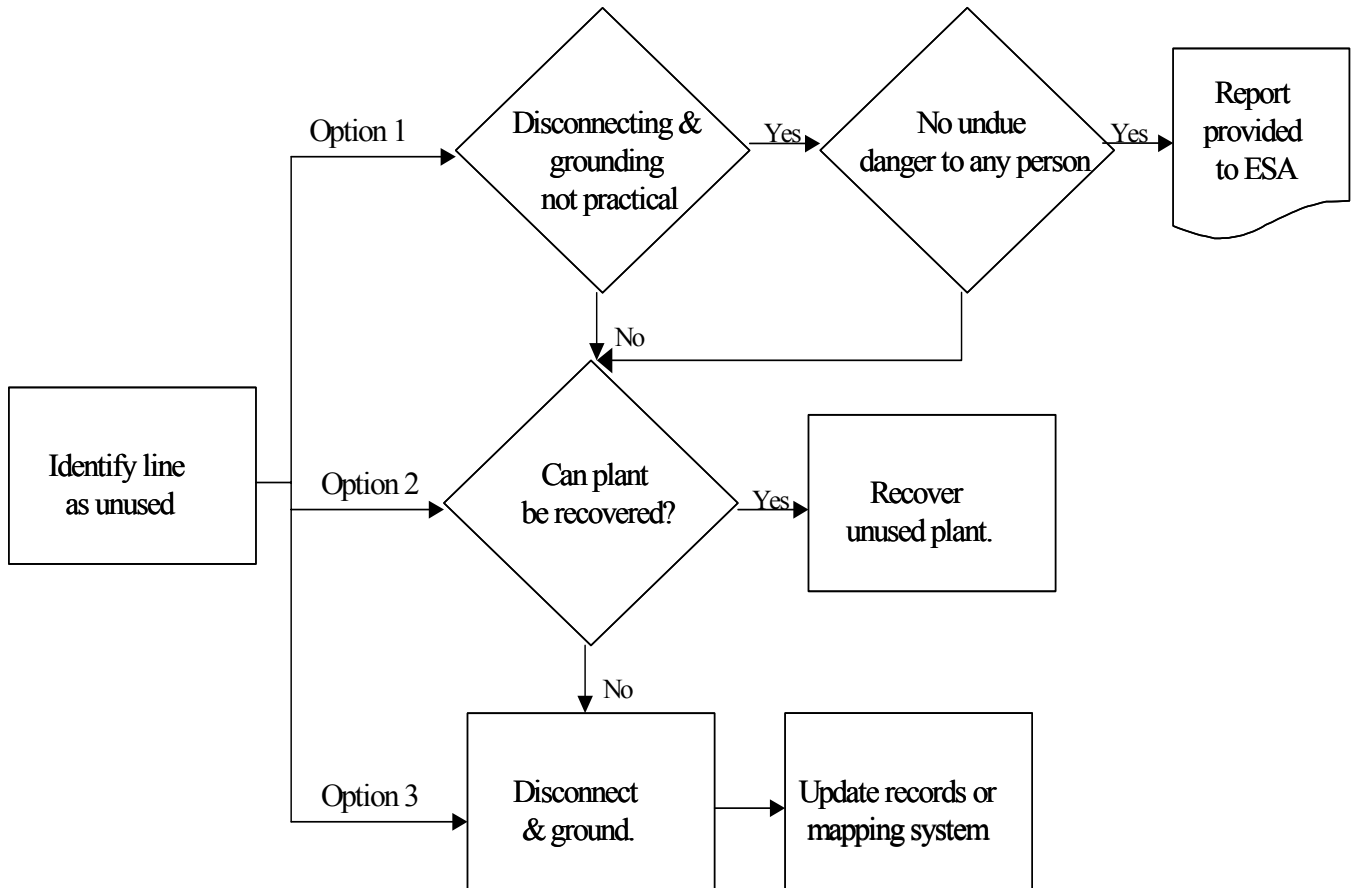
2.1.3.3 Disconnect and ground; or

2.1.3.4 Provide a report to ESA signed by a professional engineer as per section 11(4).

See the following diagram for more information.



Diagram 2.1.3



2.2 Why should accurate records of *unused* underground lines be maintained?

In accordance with the Ontario Regional Common Ground Alliance Best Practice Version 1.0, Section 5-4.5 calls for maintaining detailed mapping information of all facilities including abandoned or sold facilities.

As more underground lines become unused and abandoned, there is a higher probability that excavators will come across those lines. By accurately identifying abandoned lines on cable locate requests the chance of the excavator finding the line and not being able to identify it as live or abandoned will be minimized, resulting in fewer work stoppages, less need to call the utility for identification of the



line, and fewer power outages due to line misidentification.

- 2.3 Are “*unused*” lines the same as “abandoned” lines?  
Yes, once a line is declared unused by a utility, it is treated as abandoned plant.
- 2.4 Are temporary ground methods acceptable to disconnect and ground *unused* lines?  
No.
- 2.5 How should customer owned plant that has been abandoned be treated?  
Customer owned plant is not part of the utility distribution system and is subject to the Ontario Electrical Safety Code. If a distributor is concerned that abandoned customer owned plant has been left in a condition hazardous to the public, it should contact the Electrical Safety Authority.
- 2.6 Should lines built for future use be considered *unused* if they will not be put into service in the next twelve months?  
These lines can be considered an integral part of the distribution system. However, they should be maintained in a condition that presents no undue hazard to the public until the lines are put into service.
- 3.0 **What documentation is required?**
- 3.1 LDC must have a documented process that ensures that the Regulation is complied with.
- 3.2 What kind of records should be kept?  
Records should be available to support LDC’s declaration of compliance. These records may include maps with abandoned facilities indicated, records maintained as part of the Construction Verification Program, and signed certificates sent to ESA identifying lines that are *unused* but not disconnected and grounded.

Appendix A

<b>UNUSED LINES CERTIFICATE</b> Report to be filled out for unused lines, excepting those used for backup or emergency purposes, that is not disconnected and grounded as per Section 11 of Ontario Regulation 22/04	
Date:	Please complete as applicable
1. Description of Location:	Xxxx Street, from xxxxx to xxxxxx
2. Feeder Designation:	XXMx
3. Description of Line:	xx kV Circuit
4. What is the reason for the line being unused?	
5. Comment on why there is no undue danger to the safety of any person.	
<b>This is to certify that:</b> <ul style="list-style-type: none"> <li>- <b>Disconnecting and grounding the above lines is not practical in the circumstances and;</b></li> <li>- <b>No undue danger to the safety of any person will be caused if the lines are not disconnected and grounded.</b></li> </ul>	
<b>Certified By: (Professional Engineer)</b>	
Title:	
<b>This form must be sent to the ESA Utility Regulation Department.</b>	
Person Form Sent To:	
Date:	