

Electrical Distribution Safety

DISTRIBUTION COMPANY AWARENESS:

This Distributor Bulletin is to provide information on changes in the 25th Edition/2012 of the Ontario Electrical Safety Code (OESC). Section 75 of the OESC has been renumbered. This bulletin reflects changes to the new rule numbers in Section 75 and is intended to replace Information Bulletin DSB-06-11. It is recommended that copies of DSB-06-11 be destroyed and replaced with this bulletin.

There have been inquiries from LDC's in regards to area voltage conversion projects directly impacting customer owned equipment. This bulletin is to clarify what is acceptable under the Ontario Electrical Safety Code (OESC) with respect to existing customer owned equipment, in order for the LDC to assess what impact the conversion project will have on their customer. For example; an LDC upgrading their primary system infrastructure from 2.4/4.16kV to 16/27.6kV causing a direct impact on customer owned primary lines and equipment on their property.

Work up to the demarcation point falls under the requirements of Ontario Regulation 22/04. Work past the demarcation point falls under the requirements of the OESC and Contractor Licensing Ontario Regulation 570/05. This will include the filing of an application for inspection with ESA.



Electrical Distribution Safety

Categories of what is acceptable under the OESC on existing customer owned equipment:

Pole Conditions:

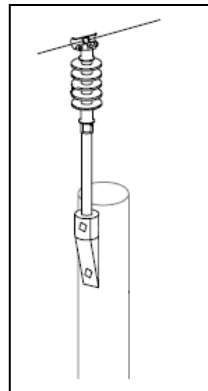
Inspection must be done for signs of deep cracks, deterioration and internal rot if existing privately owned wood poles are to be re-used. Where poles have been verified to be in an acceptable condition, but indicate signs of ground settlement, compaction of soil using an approved method or the installation of a steel culvert will be required.

Use of Pole Top Brackets and Extensions

Pole top brackets and pole top extensions are not recognized under the OESC. A deviation will be issued for the use of pole top brackets or pole top extensions only if existing tangent pole applications are found to be in acceptable condition and clearance to final grade or between circuits cannot be met. They will not be permitted for new construction and dead end poles.

Clearance to ground and from structures- OESC Rules 75-706 to 75-710:

Primary lines shall have a minimum height of 7.0m and secondary lines require 6.1m clearance from final grade at maximum conductor sag. The use of pole top brackets or pole top extensions may be used on existing poles which are determined to be in an acceptable condition.



Pole top bracket



Pole top extension

Pole Strength:

The use of pole top brackets or extensions and larger size conductor usually results in an increased load/stress being applied to the pole. Evaluation shall be done to determine if the existing pole class is adequate to accommodate the additional load.

Clearance between circuits-OESC Rules 75-700 and 75-704:

Voltage conversions from low voltage lines to higher voltage lines may require the need for increased separation between the phase conductors and neutral.

Electrical Distribution Safety

Conductors:

Primary line conductors shall meet the requirements of the OESC **Rule 75-500** and not be less than #2 AWG ACSR. Existing solid conductors such as #6 CU shall be replaced since mechanical stresses may cause the conductor to become brittle and break.

Insulators:

Conductor supporting insulators may be required to be replaced, as they must correspond to the new system voltage. Selection of insulators on private property shall be to the requirements of the OESC **Rule 75-400**.

Guying and Anchor distance:

Existing guying shall be re-evaluated. If pole top brackets or extensions are being installed, guying calculations shall be required since the conductor height has increased. New anchors may be required to be relocated if a pole top bracket or pole top extension is used. OESC **Rule 75-304** requires the anchor distance from the pole to be at least one-third the height of the pole above ground.

Tree Trimming:

Privately owned primary and secondary lines on private property shall have adequate clearance from trees as per the OESC **Rule 75-712**. Trees shall be trimmed so the minimum clearance to the nearest conductor horizontally at maximum conductor swing and vertically at maximum sag shall be 1m for secondary lines and 4m for primary lines.

Overcurrent Protection:

Primary lines require the use of properly rated overcurrent protection devices as per OESC **Rule 36-204**.

ESA RECOMMENDS:

Prior to the conversion project, LDC's should initially communicate and resolve all issues with the property owner in regards to assets owned by the property owner directly impacted by the LDC's conversion.

ADDITIONAL INFORMATION:

Information requests and follow-up may be directed to ESA at Utility.Regulations@ElectricalSafety.on.ca.

For questions on this bulletin please be prepared to quote Bulletin "DSB-01/12".