

Residential Consumer's Services Damaged During Emergencies: Factors to consider by Local Distribution Company (LDC) line crews to either disconnect or leave the consumers' service energized.

Background

During wide spread emergencies such as ice and wind storms, there are high probabilities for many overhead consumers' services to be damaged by ice, fallen tree limbs, etc.

Repairs required for a large number of damaged consumer services may take some time depending on availability of manpower and materials for repairs. In order to maintain power, particularly to dwellings, and in the interest of public safety, care must be taken when leaving services energized to avoid undue hazards.

This document is intended to outline factors to be considered when deciding whether to disconnect a damaged consumer service or to leave it energized.

Direction

Overhead **supply service** conductors to a consumer's service up to the demarcation point are the responsibility of the LDC. Some overhead supply service conductors may also be part of a consumer's service. The following factors should be considered by the LDC to determine whether to disconnect the consumer service or not.

Some points to consider:

- Condition of conductors and service equipment
- Clearance to roadways or driveways

Each instance needs to be determined on its own safety merits; disconnection may be required in the interest of public electrical safety.

Where the overhead supply service is down but still energized, there needs to be an assessment done to determine if anything has been electrically compromised or damaged.

Note

In all cases, damaged consumer's services must be reported to ESA, in order to have repairs by the owner mandated.

The LDC is to follow the requirements of Ont. Reg. 22/04.

An ESA Hazard Notification (Customer Advisory Form) shall be initiated by the LDC and sent to ESA and the customer shall be advised repairs are required.

All repairs of customer equipment are to be completed by a Licensed Electrical Contractor (LEC) including the requirements for an application for inspection.

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Example 1: Damaged metallic consumer service mast

When a rigid steel metallic mast or consumer service conduit is broken or creased, from being bent, the integrity of the conductors due to sharp edges inside the mast cannot be determined. The following steps shall be taken:

- **No attempts shall be made to straighten the mast or consumer service conduit ;and**
- **Service must be immediately isolated and de-energized by the LDC.**



The LDC may provide a temporary feed directly to the meter base when the following conditions are met. (See Electrical Safety Authority Distribution Bulletin #DSB-02-08 <http://www.esasafe.com/assets/files/esaeds/pdf/dsb/DSB-02-08.pdf>):

- Consumer service conductors entering the side of the meter base must have a suitable box connector to avoid exposing live terminals to the public
- Temporary supply service cables must be identified and barriered
- Homeowner must be aware of temporary supply service on his/her residential property
- Members of the public shall not be exposed to accessible bare neutral conductor
- An ESA Hazard Notification shall be initiated and the customer shall be advised repairs are required.

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Example 2: Slightly bent metallic consumer service mast

If a rigid steel metallic mast or consumer service conduit is bent, not cracked, and the bend is unlikely to damage the consumer service conductor, the service may be left energized temporarily if it meets the following:



- Ensure the terminals/supports inside the meter base are not damaged;
- Overhead conductors shall be protected as to reduce the probability of exposure to electrical safety hazards.
- An ESA Hazard Notification shall be initiated and the customer shall be advised repairs are required.

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Example 3: Damaged non-metallic (PVC) consumer service conduit

If a non-metallic (PVC) consumer service conduit is damaged, either broken or pulled apart, the service may be left energized temporarily if it meets the following:

- Ensure the conductor insulation is intact;
- Ensure the terminals/supports inside the meter base are not damaged;
- Overhead conductors shall be protected as to reduce the probability of exposure to electrical safety hazards.
- An ESA Hazard Notification shall be initiated and the customer shall be advised repairs are required.



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Other Factors to Consider

In addition, ESA also recommends where possible to use Meter Socket Adapters for temporary connections:

It is imperative that the continuity of the neutral conductor be assured. Loss of neutral continuity may create dangerous voltage imbalances on the consumer's service and distribution equipment. It is not acceptable to rely on the service ground conductor to act as a neutral, even on a temporary basis.

