

Operating Guideline # 820

Electric Power Line Emergencies

December 10, 2019



PURPOSE:

The purpose of this Operating Guideline (OG) is to establish guidelines for responses involving power lines.

ISSUE/RATIONALE:

The risk of injury and death to firefighters during emergencies involving live electric current from downed power lines is substantial as the threat is often invisible to the naked eye. In most situations firefighting operations are limited until the electric current is confirmed off.

GUIDELINE:

General

1. On arrival at an incident involving energized power lines, firefighters shall establish a safety perimeter and keep all personnel and citizens from entering the zone. This zone initially shall extend 30 meters (100 feet) in each direction.

2. Size-up factors and situational elements will determine firefighter's possible course of action depending on the nature of the situation and the voltage of the electrical lines involved.

Transportation Incidents

3. For incidents involving vehicles that have come into contact with power lines, maintain a minimum safety zone of 10 meters (33 feet) from any wires or objects the wires are touching.

4. Attempt to determine if there is a person within the vehicle or close proximity to the power lines.

5. Direct any persons in the vehicle to remain in the vehicle.

6. If the vehicle can be driven, have the driver slowly move the vehicle away from the wires. If the wire(s) snag on the vehicle, have the vehicle stopped and shut down. If it can not be determined where the line is or if it is snagged, direct the operator to shut down the vehicle and engage the parking brake.

7. If the vehicle is on fire, clearly instruct occupants to self-rescue themselves by jumping from the vehicle and using short "hops" or shuffling feet to move away from the vehicle. No firefighting activities shall be undertaken until the power has been confirmed as disconnected.

8. At no time shall firefighters enter the danger zone to assist persons inside a vehicle in contact with live electrical wires.

9. At no time shall firefighters move any potentially live power lines.

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Trees or Limbs on Power Lines

10. For incidents where a tree or tree limb has contacted live power lines the minimum safe distance is 30 meters (100 feet) measured from the base of the tree.

11. Ensure no persons are within the danger zone.

12. If there is a fire involved within the danger zone, no firefighting actions are to take place. Fires outside of the danger zone may be fought using normal firefighting practices.

13. At no time shall firefighters cut or move trees or limbs in contact with live wires.

Fires Involving Electrical Equipment

14. Fires involving electrical equipment should only be fought when persons are in jeopardy. Once victims have been evacuated, firefighting operations should cease until the power is disconnected, rendering the scene safe.

Other Considerations

15. For fires on poles, fight fire from a minimum 10 meters (33 feet) with a 30 degree fog pattern at 750 kpa (100 psi). Water should be directed to protect exposures first, then electrical equipment.

16. Fires on hydro right-of-ways should be fought to keep fire away from hydro poles and equipment. Smoke and flames are electrical conductors. Minimum distances are to be maintained and nozzles shall be set at 30 degrees flowing at 750 kpa (100 psi).

17. For fires involving exposures, the fire shall be fought with consideration of the minimum approach distances, keeping water away from the electricity, using a 30 degree pattern at 750 kpa (100 psi)

For Incidents Not Involving Persons or Property

18. Command shall determine if there is a threat to persons or property. If the threat exists, firefighters should remain on scene until the situation is stabilized by the removal of the power source. The number of firefighters and the amount of equipment to remain on scene will be determined by the Incident Commander based upon the degree of threat that exists.. If no threat exists, apparatus should be put back in service at the earliest opportunity.

RESPONSIBILITY:

It is the responsibility of all members to comply with the provisions of this OG and particularly that Company Officers (supervisors) and firefighters (workers) ensure that they adhere to their duties in accordance with the Occupational Health and Safety Act.

REFERENCES:

- Occupational Health and Safety Act (RSO 1990, c. 0.1)