Stoney Point Fire Department

# ELECTRICAL FIRE RESPONSE SOG

## *SCOPE*

This guideline shall apply to all members of the Stoney Point Fire Department and shall be adhered to by all members.

## *PURPOSE*

Purpose of this guide is to insure that all members of the SPFD have available to them the tools necessary to protect themselves and the public at incidents involving electricity.

## *DEFINITIONS*

**AMPERAGE or CURRENT** - The amount of electrical charge flowing past a given point per unit of time, measured in amperes or amps. Amperage is the measure of electrical current flow.

**ELECTRICITY** - The flow of electrical charge through a conductor placed between two objects having a different voltage.

**SHALL -** Indicates a mandatory requirement.

**Policy Number**

**5A.007**



**STANDARD OPERATING GUIDELINE (SOG)** - Documents that help establish how an organization will operate and how its members are expected to carry out specific duties outlined in general terms.

## GUIDELINES

Electric company linemen are trained and experienced in the handling of energized electrical conductors. These trained linemen are available for call 24 hours a day.

**IN THE EVENT OF AN EMERGENCY OR FIRE INVOLVING ELECTRICAL EQUIPMENT OR WIRES, IMMEDIATELY REQUEST ASSISTANCE FROM THE APPROPRIATE ELECTRIC COMPANY.**

In most cases, the fire fighter should wait for trained electrical company personnel to arrive on the scene before attempting to perform any work around energized wires or lines.

A dead or injured fire fighter only adds to the tragedy of an accident or fire. The primary responsibility of personnel on an emergency incident is the protection of lives, including your own.

**SIZE UP:**

Upon arrival at any emergency incident, the first task to be performed is size up. Size up involves the identification of all problems that exist, might exist, or that may develop during emergency control operations. The fire fighter should also consider electrical hazards during size up.



**ASSUME ALL WIRES TO BE ENERGIZED AT HIGH VOLTAGE!**

All wires should be considered to be electrically energized. Even telephone and television cables may be energized if contact has been made with electrical wires.

**Disconnecting Electrical Service**

One of the best places to interrupt electrical service is at the service disconnect panel. Fuses can be removed or circuit breakers tripped to shut off electrical power to the fire affected sections of the building. Disconnect switches should not be operated unless the fire fighter, building floor, and switch panel are all dry. Fire fighters should not enter a flooded basement to disconnect electrical service.

**Cutting Wires and Pulling Meters**

Pulling an electrical meter can create an electrical arc and possibly an explosion. The potential electrical arcing and meter explosion can seriously injure the person who is attempting to pull the meter from its base. After an electrical meter is removed, the energized contacts in the meter base are left exposed. The exposed contacts present an electrical safety hazard to anyone who is working near the meter base, **Therefore "NO" personnel with the Stoney Point**

**Fire Department will engage in cutting wires, opening transformer switches, or pulling electrical meters.**

Many electrical services, especially services that carry more than 200 amps, are equipped with C.T. (Current Transformer) meter. **Disconnecting a meter WILL NOT! Shut off the electrical supply.**

## Electricity and Firefighting Operations

Personnel operating on the fire ground should always be alert for electrical hazards. If visibility is poor, adequate lighting should be provided to ensure that all possible hazards can be seen and identified.



Electrical hazards can also exist on the outside of a building. Personnel should stay alert for downed wires, wires that could possibly fall, and other electrical hazards associated with the incident. The location of overhead and underground wires should be determined and continually monitored.

Extreme caution should be exercised with parking fire apparatus at the scene. Personnel should avoid positioning any vehicle directly beneath overhead electrical lines.

Ground ladders can also create electrical problems. Personnel operating on the fire ground should locate all ladders away from electrical service entrances and overhead wires. Personnel should also exercise extreme caution while raising a ladder or moving the ladder in a vertical position.

## Downed Wire

A fallen electrical wire can create many hazards. The energized wire may land on a vehicle, pool of water, metal fence, or a metal covered building. The wire may also land directly on the ground. Automobile accidents can also create an emergency situation that involves downed or broken electrical wires.

Whenever an energized conductor falls, it presents a danger to both fire fighters and the public. It is impossible to determine if a conductor is energized by its appearance. Personnel should never assume that a wire is "dead." Even if all of the conductors are cut or broken, a hazard may still exist since the wires may be energized from both directions. Fire Department personnel **shall not** touch any wire, even if told by power company representatives the power is off. Let power company personnel remove downed wire(s).

## Establishing Safety Zones

Damaged or downed electrical conductors, insulators, poles, or towers require that the incident commander or division officer establish a danger zone. The danger zone is the area that all persons and vehicles must be kept out of. The danger zone for overhead electrical conductor accidents should extend at least one full pole span beyond the damaged poles or wires. The danger zone should be extended if the ground is wet, if objects such as fences, guardrails, or railroad tracks are involved, or if it appears that additional poles or towers may fail.



If possible, the danger zone should be roped off to clearly mark the outer edge of the danger zone; unauthorized personnel shall be kept out of the danger zone.

Fire fighting personnel entering the danger zone shall:

- Wear full protective clothing.
- Have back-up personnel in place for any unforeseeable incidents.
- Have back-up lines or extinguishing agents at hand.
- Be assigned to a Division or have a specific task.

## Command Responsibilities

As with any fire or emergency scene, the first arriving unit/officer should size up all of the potential hazards at the scene of an emergency that involves electricity. In most cases, personnel operating within the danger zone should not attempt to deal with the electrical hazard directly, but should protect all persons in the area by keeping them away from the hazard. The best procedure in the majority of incidents is to stand by at a safe distance from the hazard until an authorized representative of the electric company arrives on the scene.

**The first arriving unit shall accomplish the following additional command responsibilities**:

- Establish a Danger Zone as listed above, by use of fire line tape, rope, traffic cones, etc.
- Notify the appropriate power company.
- Alert all incoming units and personnel of the hazard.

## Summary

All personnel should remember the following principles when dealing with an electrical emergency

- Call electrical company immediately
- Treat all wires as though they are dangerous and energized at high voltage.
- Maintain a constant guard over fallen wires or damages electrical equipment.
- Prevent all unauthorized persons from approaching the emergency scene.
- Continue to guard the scene until relieved by an authorized representative of the electric company.
- Exercise extreme caution when approaching the scene of an electrical emergency especially at night.