



Table Top Training Drills

Table Top Exercise- April 2011

Electrical Wires Down

Emergency calls for wires down in the street can be similar to a sleeping giant. They look very calm and docile but when disturbed, they can create severe hazards for civilians and fire service personnel. In near-miss report [10-1088](#), fire companies and electrical utility companies were responding to numerous incidents for over 5 ½ hours. Fatigue was setting in and the morning rush hour was starting to begin. Place yourself and your crew at the scene of the excerpt below and discuss your departments SOPs and SOGs regarding this situation.

"We responded to a "wires down" call from a wind storm that had hit the area. We secured the area and determined that the wires were power lines that had been broken from a falling branch. The wires were stretched across the road with part still connected to the power pole. We had been out on similar runs since 0230, nonstop. It was approaching 0800, when traffic began to become heavier in this area as people were heading to work. We had redirected several cars and trucks to find other routes. I decided at that time to move the wire to the side of the road to enable traffic to be able to pass down the street safely. I took a fiberglass barricade and began to push it to the side, and was almost all the way across when the wire looped back on itself and the broken end contacted the wire strand that supports the power line. This resulted in a large flash/ arc and a jump in the wire. I immediately released the barricade and jumped back out of the way. Fortunately, the wire did not touch me. I could have suffered severe electrical shock."

Consider the checklist below used by the Fire Department of New York.

- Immediate notification to the dispatcher/utility for priority utility company response.
- Isolate the area.
- Keep apparatus away. Overhead wires are supported by poles, which could possibly topple in a domino effect, thereby endangering members if they are within the area of possible pole collapse.
- Check nearby buildings for heat at fuse box/electrical service entrance box. Utilize thermal imaging cameras as hand contact may result in electrocution if the box is energized.
- Caution civilians trapped in vehicles with an electrical line over it to remain in their vehicle until the wires is de-energized by the utility company.
- Stretch a handline with a fog nozzle. Use distance as a safety factor. Keep at least 25 feet away from any downed wire while operating this handline.

The following are additional guidelines for the safety of all members:

- Fallen or hanging wires are not to be moved by members.
- Avoid metal gratings, manholes, fences, puddles, wet grass, etc.
- Highly energized wires often whip and snap while producing sparks.
- The ground immediately near a fallen wire may be energized (voltage gradient) causing injury or death to anyone approaching the downed wire.
- Do not place weighted objects on downed wires. This may cause the wire to make substantial contact with the ground and produce arcing and whipping as well and produce a voltage gradient in the immediate area.
- Do not open the house service. Heated wires may generate carbon monoxide gas in the service box, which can explode when the opening of a breaker creates a spark.