



first responder **beware**®

Staying Safe While Saving Others
Electrical Safety for First Responders



- **Firefighters, police and EMTs are typically first on the scene in an emergency, and face the greatest risk from electrical infrastructure contacts.**
- **Understanding the potential dangers and dealing with them correctly makes everyone safer.**
- **This program is designed to supplement, not replace, your department's standard operating procedures (SOPs).**

Electrical Safety Basics

- **Respect the Power of Electricity**
- **Hands Off Electrical Systems**
- **Protect Yourself and Others from Shock**
- **Always Observe the 10-Foot Rule**
- **Be Aware of Overhead Power Lines**
- **Use Extra Caution Near Downed Power Lines**
- **Manage Substation and Transformer Fires**

Respect the Power of Electricity

- **Electricity will seek all paths to ground, including, but not limited to:**
 - Your body
 - Trees
 - Water
 - Metal objects and structures
 - Long or tall equipment
- **Even low-voltage electric shock can be fatal.**
- **Standard-issue protective gear **DOES NOT** insulate you against electric shock.**
- **Electric shock and burn injuries may include internal tissue damage that is not immediately apparent.** Make sure victims receive thorough medical attention.

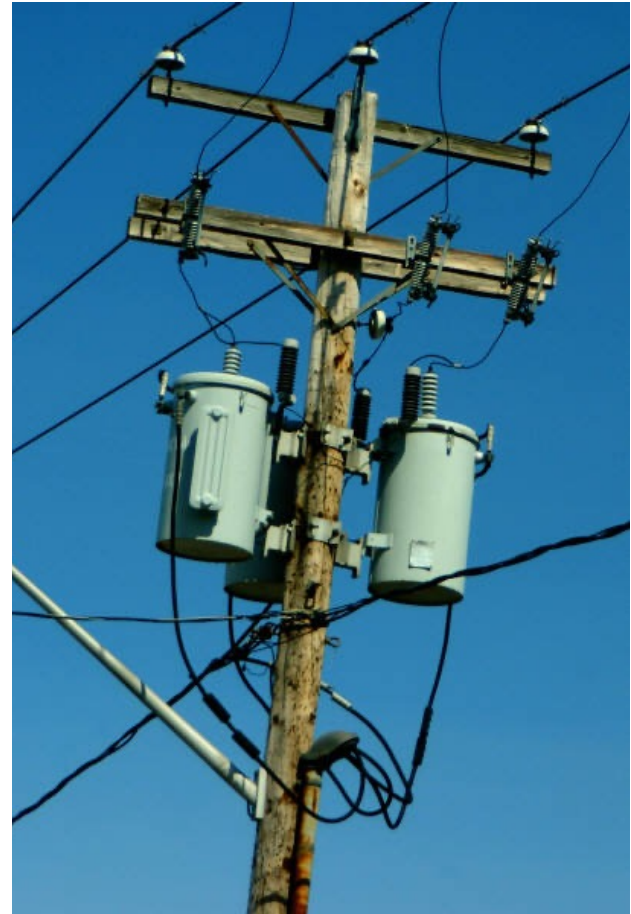
Hands Off Electrical Systems

- **Never attempt to disconnect electrical services:**
 - **Never cut service wires.**
 - **Never attempt to remove electrical meters.** This is extremely dangerous and can cause serious injury or death. Instead, turn off power at the main circuit breaker.
 - **Never attempt to open or enter a manhole or vault** until you are sure it has been de-energized.
- **Never touch or attempt to move power lines.**



Protect Yourself and Others from Shock

- **Always identify power lines and electrical equipment upon arrival at an incident scene.**
- **Assume all lines are energized** as well as all objects in contact with power lines.
- **If power lines or electrical equipment are involved in an incident,** have your dispatcher contact Dominion Energy.
- **Provide the best possible directions** to the location.
- **Secure the area.**



Always Observe the 10-Foot Rule

- Personnel, ladders and fully extended aerial equipment must never get closer than **10 feet** from lines up to 50,000 volts.
- Higher voltages require greater clearances. For example, lines on large transmission towers require additional clearances of up to **50 feet**.
- There is no uniform system for identifying power line voltage. When in doubt, contact Dominion Energy for clearance information.
- **Electrical safety distances given are minimums. Always use the maximum possible distance.**

Be Aware of Overhead Power Lines



- **Park emergency vehicles as far away as possible from overhead power lines.**
- **Keep all personnel and equipment as far away as possible from overhead power lines, including the service wires that run from utility poles to buildings.**

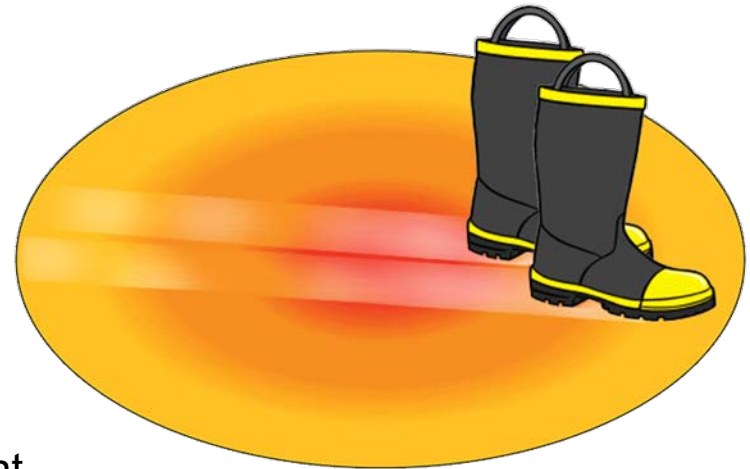
Be Aware of Overhead Power Lines

- **If your equipment contacts a power line:**
 - The equipment should be considered energized.
 - **Call Dominion Energy.**
 - If you can do so safely, **move the equipment far away from the line.**
 - **If the equipment cannot be moved, stay put, and warn others to stay away** until utility personnel give the all clear.

Be Aware of Overhead Power Lines

■ If fire or other imminent danger forces you off the equipment:

- **Jump clear**, keeping both feet together and without touching the equipment and the ground at the same time. Land with your feet together.
- **Shuffle at least 30 feet away**, keeping both feet close together and on the ground at all times. Shuffle by sliding your feet on the ground in a heel-to-toe motion.
- **Do not run or take large steps.** When equipment contacts a line, electricity spreads out in the ground like ripples in a pond, and the voltage decreases with distance from the point of contact. If your legs bridge two areas of different voltage, you could be killed.



Use Extra Caution Near Downed Power Lines



- **Park emergency vehicles away from fallen lines.**
- **Secure the area:**
 - Keep yourself and the public as far away as possible from fallen power lines and objects that may be energized—never get closer than 30 feet.
 - Transmission lines from large towers require a distance of 100 feet.
- **Never touch or attempt to move fallen lines or objects contacting them.**

Use Extra Caution Near Downed Power Lines

- **DO NOT** enter, approach or contact areas or vehicles that may be energized.
 - Call Dominion Energy.
 - Instruct occupant(s) to drive the vehicle far away from the line if can be done safely.
 - If the vehicle cannot be moved, **instruct the occupants to stay put until utility personnel give the all clear.** Staying in the vehicle is their **BEST** protection against electric shock.



Use Extra Caution Near Downed Power Lines

- **If occupants in an energized vehicle are in imminent danger from fire or other hazards:**
 - Instruct them to jump clear without contacting the vehicle and the ground at the same time.
 - Tell them to shuffle at least 30 feet away, keeping both feet close together and on the ground at all times.
 - They should shuffle by sliding their feet on the ground in a heel-to-toe motion. They should not allow any distance between their two feet, as this increases their risk of electrical shock.
 - Demonstrate the proper procedure from a distance.
- **If victims are injured, disabled or otherwise unable to safely exit the vehicle on their own,** your incident commander will assess the situation and tell you how to proceed.

Substation Fires

- **Burning electrical equipment is already ruined and will be replaced. The safest course of action is to **LET IT BURN**.**
- **Contact Dominion Energy and wait for their personnel to arrive. Never attempt to enter a substation without utility personnel present.**
- **Isolate the area **AT LEAST** 300 feet in all directions. Keep unauthorized persons away.**
- **Electrical equipment contains oil. Be alert for explosions and toxic smoke.**
- **Monitor for oil runoff.** Direct any oil away from catch basins and surface waters.
- **Protect area exposures** to prevent fire from spreading.
- **If an equipment fire must be suppressed,** utility personnel and the incident commander will tell you how to proceed.

Transformer Fires

- **Do not open or enter switch cabinets or pad-mounted transformers.**
 - **Never cut locks or pry cabinets open.** Equipment contains live electrical components, and if you contact them, you could be killed.
- **Call Dominion Energy, evacuate the public, and protect area exposures.**
- **Let transformers burn until otherwise instructed by utility personnel.**



Electrical Safety Review

- **Identify all overhead power lines and electrical equipment upon arrival at an incident scene.**
- Whenever you suspect electrical infrastructure is involved, or when in doubt, **call Dominion Energy.**
- **Hands off electrical systems.**
 - Never attempt to disconnect electrical service.
 - Never touch power lines.
- **Keep all personnel and equipment as far away as possible from overhead power lines**, including the service wires that run from utility poles to buildings. Assume all power lines are energized.
- **Even low-voltage electric shock can be fatal**, and your gear does not insulate you against electric shock.
- **When responding to a substation or transformer fire, let it burn**, evacuate the area, and protect exposures.

Contact Information

- In case of emergency, call Dominion Energy:
 - NC, VA: **866-DOM-HELP (366-4357)**
 - SC: **888-333-4465**
 - TX: **911**
- Visit **firstresponder.domsafety.com** for advanced electrical safety information and training tools.



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