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AN EXELON COMPANY

first responder
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Staying safe while protecting 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 20-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 always seeks the easiest, most direct path to the ground through conductors:**
 - 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.

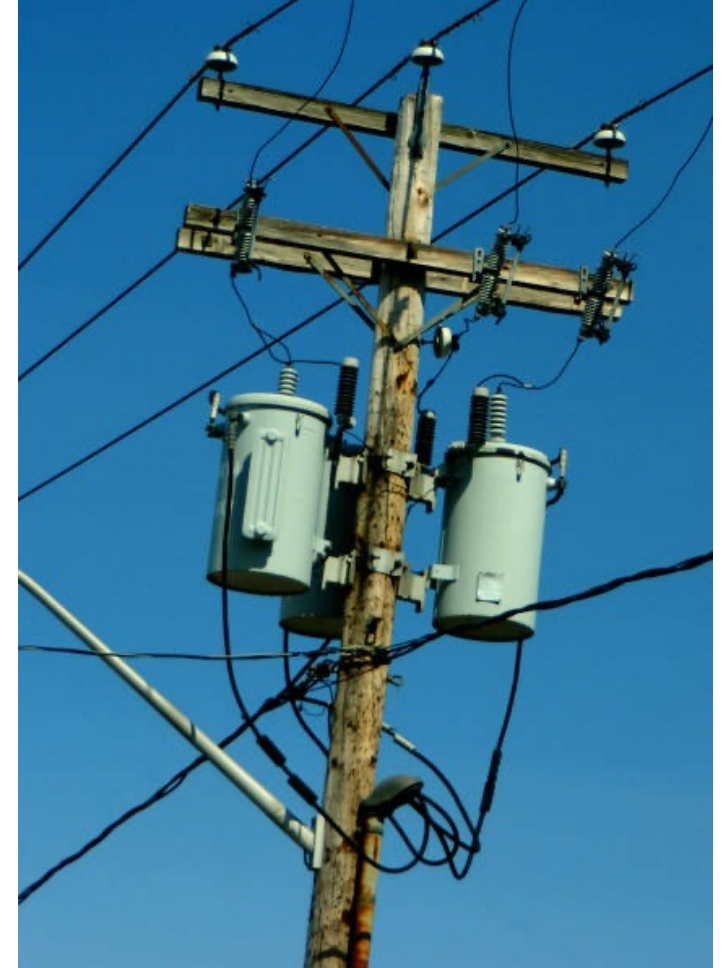


Hands off electrical systems

- **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.
 - **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 BGE immediately.**
- **Provide the best possible directions to the location.**
- **Secure the area.**



Always observe the 20-foot rule

- Always keep yourself and your equipment *at least 20 feet away* from power lines.
- Higher voltages require greater distances.
- There is no uniform system for identifying power line voltage. When in doubt, contact BGE 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 aerial equipment *at least 20 feet away* from overhead lines.
- **Use a spotter.** An equipment operator working alone cannot safely judge the distance from the equipment to overhead power lines.
- **Never use a solid water stream** to fight fires near overhead power lines.



Be aware of overhead power lines

- **If your aerial equipment contacts a power line:**
 - **Remain on the equipment.** Move the equipment away from the line if you can do so safely. If the equipment cannot be moved, all personnel on the equipment should remain there.
 - **Tell others to stay away.** Anyone who touches the equipment or even the ground nearby may be injured or killed.
 - **Have someone call BGE at 800.685.0123 immediately.** Utility personnel will respond quickly, switch off the power and tell you when it is safe to get off the equipment. Wait for their instructions.

Be aware of overhead power lines

- **If fire or other imminent danger forces you off energized equipment:**
 - **Do not touch the equipment and the ground at the same time.**
 - **Jump clear.** Land with your feet together and take very short hops, keeping feet close together and making contact with the ground at the same time.
 - **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 **at least 35 feet away** from fallen power lines.
 - Transmission lines from large towers require a distance of 100 feet.
- Never touch or attempt to move fallen lines or objects touching them.
- Never use a solid water stream to fight fires near downed lines.



Use extra caution near downed power lines

- **DO NOT** enter, approach or touch areas or vehicles that may be energized.
 - **Call BGE immediately.**
 - **Instruct occupant to drive the vehicle away from the line if this can be done safely.**
 - If the vehicle cannot be safely moved, **instruct all 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 touching the vehicle and the ground at the same time.**
 - **Tell them to land with their feet together and take very short hops**, keeping their feet together and making contact with the ground at the same time.
 - **Demonstrate the proper procedure from a safe 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 BGE immediately. **Never attempt to enter a substation without utility personnel present.**
- **Evacuate the area** while you wait for BGE personnel to arrive. Keep everyone *at least* **300 feet away** from the substation.
- **Protect area** exposures to prevent fire from spreading.
- Electrical equipment contains oil. **Be alert for explosions and toxic smoke.** Stay upwind and consider initial downwind evacuation for *at least* **1,000 feet**.
- **Prevent contamination of water resources.** Monitor for oil runoff and direct it away from catch basins, surface waters and wetlands.
- **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 come into contact with them you could be killed.
- **Call BGE, 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 BGE.**
- **Hands off electrical systems.**
 - Never attempt to disconnect electrical service.
 - Never touch power lines.
- **Assume all power lines are energized, and keep yourself and your equipment *at least 20 feet away.***
- **Even low-voltage electric shock can be fatal.** 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 BGE at **800.685.0123**.
- For additional information, visit BGE's First Responder website at **BGE.COM/FirstResponder**.



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Thank you