FREWSBURG FIRE DISTRICT OPERATIONAL POLICY	Section 7	EMERGENCY OPERATIONS	
	SUBJECT	ELECTRICAL EMERGENCIES	
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I. SCOPE

This policy applies to all Frewsburg Fire District personnel operating at emergency scenes involving the potential to come into contact with electrical currents.

II. PURPOSE

This guideline will establish a standard approach and response to the report of power lines down. Power lines can come in contact with the ground as a result of storm related activity, fire, or vehicles striking power poles. In all cases, the potential for electrical shock/electrocution and secondary fire must be considered.

III. ELECTRIC SAFETY AWARENESS

1. Electricity will travel any conductive path it can as it seeks a ground.
    a. A direct path to ground can occur when contact is made between something energized and a portion of your body, such as your hand, arm, head, or other body part.
    b. An indirect path to ground happens when you are holding something or touching an object that is in contact with something energized. This could include tools or other equipment you may be holding or when touching a fence, vehicle, or other object that may be in contact with something energized.

IV. GRADIENT VOLTAGE (STEP AND TOUCH POTENTIAL)

1. When power lines are down, they will energize the ground around them. If your feet are in areas where there is a voltage difference, you could complete the circuit and be the source to ground. This is called "**step potential**."
    a. This danger could be indicated by a tingling sensation in the feet and serve as a warning to back away from the area.
    b. Step potential is more severe when the ground is wet.

V. KEY POINTS

1. Downed lines must always be considered energized with potentially lethal current.
2. Lines can reset and become "hot" or "energized" again by manual operation of a switch, by automatic re-closing methods (either method from short or long distances away), by induction where a de-energized line can become hot if it is near an energized line, or through back feed conditions.
3. Power line tends to have "Reel Memory" and may curl back or roll on itself when down.
4. Use caution when spraying water on or around energized electrical equipment. Hose streams conduct current! Never direct streams directly onto power lines. Use a fog spray at the base of the pole. Your primary responsibility is to protect the surrounding area.
5. PCB hazards: Smoke potentially fatal; avoid and contain pools of oil around transformers.
6. You cannot tell the voltage of a power line by the size of the conductor. Most overhead conductors are not insulated.
7. Voltage can travel through both dry and especially wet ground for considerable distances.
8. Pad-mounted and overhead transformers can explode.
9. Until grounded, equipment can contain electric potential, which can cause severe injury or death.
10. Electricity can flow through the ground or other conductive objects, (fences) to point far from the scene.

VI. RESPONSE TO POWER LINES DOWN

1. Request utility company to respond.
2. Consider all down wires as "energized."
3. Place apparatus away from "down lines and power poles" and out from under involved overhead lines that could fail and fall onto equipment or personnel.
4. Secure the area/deny entry.
5. In the event of multiple lines/poles down over a large area, call additional resources.

VII. DOWN POWER LINES AND VEHICLES

1. Request utility company to respond.
2. Do not touch the vehicle.
3. Have occupants remain inside the vehicle.
4. Place all apparatus a safe distance away from downed lines.
5. If occupants must leave the vehicle, (fire or other threat to life) instruct them to open the door, not step-out! They should jump free of the vehicle without touching the vehicle and the ground at the same time; they should walk away from the vehicle with very small steps.

VIII. SUB-STATION, TRANSFORMER, AND ELECTRICAL VAULT

1. Request utility company to respond.
2. Clear the area.
3. Be aware of explosion potential.
4. Place apparatus in a safe location away from overhead powerlines.
5. Protect exposures.
6. Do not make an entry until the utility representative has verified that the above electrical equipment has been de-energized. The utility representative may have to make an entry to uninvolved sections to safely de-energize the equipment.