EVERSOURCE

Outside Crew Storm Restoration Safety Guidelines (for work crews)

Worker Responsibilities:

- Comply with required federally mandated OSHA requirements and to the normal safety practices and policies of your home organizations.

Daily Safety Messages:

- All crew leads are expected to communicate the messages to their crews before the start of each workday.
- ES Storm Safety Briefing will be shared through e-mail.

E-911 Information:

- KNOW YOUR EXACT LOCATION BEFORE STARTING WORK.
- Notify crew leader and workers about allergies, medications, and medical conditions.
- Ensure your supervisor has local storm room phone number and name and address of all local medical facilities.

Conduct Documented Job Briefings:

- Before each job and when the scope of the job changes; include all personnel at site.
- Discuss hazards associated with job, work procedures, special precautions, energy source control, PPE, other crews in the area, emergency procedures.
- The documented Job Safety Briefing must be readily available at the jobsite.

System Voltages: Grounded Wye, Unigrounded Wye, and Delta Primary Circuits

- Each business entity within Eversource has its own distribution system voltage safety requirements and design considerations. Ask your owners representative and/or bird dog for circuit voltages and arc flash potential.

ES PRIMARY DISTRIBUTION VOLTAGES PER COMPANY				
Voltage	Company			
	Connecticut	New Hampshire	E Massachusetts	W Massachusetts
2,300V Delta				
2,160/3,740 V		X	X	
2,400/4,160 V	X	X	X	X
4,800/8,320 V	X	X	X	X
4,800/8,320 Delta	X			
7,200/12,470 V		X		
7,620/13,200 V	X		X	
7,967/13,800 V	X	X	X	X
11,450 kV	X			
13,200/22,860 V	X		X	X
14,000/24,940 V	X		X	
19,920/34,500kV	X	X	X	
26,558/46,000 V		X		
27,600 V Delta	X			

PPE:

- Hard hats shall be worn in work locations. Hard hats must meet ANSI Z89.1 Type 1 or 2 Class E or G.
- Safety glasses must be worn in work areas. Safety glasses must meet ANSI Z87.1-2010
- Safety shoes must be worn in work zones. Safety shoes must meet ASTM F 2413-11, M/I/75, and Electrical Hazard (EH) rated.

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- FR clothing must be worn in work areas when working on or near electrical parts or equipment at 50 volts or greater.
    - Minimum of 8 cal/cm2 ARC FLASH rated class 2.
- High visibility traffic vest (Class 3) when exposed to traffic.

Rubber Gloves and Sleeves Requirements:

- Minimum of Class II high voltage rubber gloves and rubber sleeves (or higher rated gloves and sleeves dependent upon actual system voltages exposure) are required to be worn at all times whenever an employee is exposed to conductors which may be energized or become energized, including any conductor which is effectively grounded.
- Class II rubber gloves are required to be worn at all times when utilizing any type of insulated (tested and inspected) live line tool. Any deviations must be approved by the Director of Safety or his designee.

Arc Rated Face Shields

- Arc rated face shields and hoods/or balaclava to protect the head, face, and neck are required for working on energized lines with an arc energy > 9 cal/cm^2 and also required for opening and closing (the making or breaking of primary load) when operating overhead primary switching devices (e.g., cutouts, disconnects, Trip Savers, etc.).

Use of Pole Banners:

- Pole banners are intended as an informational work control barrier for highlighting energy isolation points while crews are working beyond a protective device on primary lines.
- Other normal crew protections must also take place, such as removing the cutout door, lifting taps and grounding.
- The banner alone is **not** a protection method and should **never** be treated as such.
- Pole banners should be applied on the pole where the open device is located.
- Qualified crews shall install the pole banners and information tags and they shall remain in place until the work is complete (for the day), all grounds have been removed and all workers and equipment are in the clear.
- If a pole banner is applied at a work site, contact the person on the tag before starting any work.

NEVER ENERGIZE A LINE WHILE A POLE BANNER IS STILL APPLIED AT AN ENERGY ISOLATION DEVICE.

Managing Arc Flash Hazards:

- If performing live line work, minimize arc flash hazards with:
    - Appropriate FR clothing & Personal Protective Equipment (PPE)
- Place an upstream automatic protective device in Hot Line Tag (HLT) or in Non-Reclose Mode if HLT is not available.
- Increase your distance from the energized parts through use of Live Line Tools.

Distribution Switching & Tagging Requirements:

- Energizing or de-energizing of nomenclature (numbered) switches and three phase devices is done only under the supervision of an Eversource employee qualified on the switching and tagging list.
- Outside utility crews and contractors can work with the approval of local Eversource management on portions of radial taps. The person in charge shall assume responsibility for opening all cutouts, disconnects, jumpers, taps, and other means through which KNOWN sources of electric energy may be supplied.

Grounding of Equipment:

- All conductors and equipment shall be treated as energized until tested, found de-energized and equipotentially grounded.
- Equipotential grounding shall be utilized. If not, live line techniques shall be performed.

Backfeed:

- Backfeed shall be discussed in every Safety Brief and necessary precautions taken.

Live Line Tool Requirements:

- Live line tools and equipment shall be used to work on energized circuits and equipment when the practices and procedures for rubber gloving do not apply.
- Class II high voltage rubber gloves (at a minimum) are required to be worn at all times when using live line tools.

Traffic Control:

- Temporary Traffic Control Plans (including signs, cones, Flaggers, etc.) shall meet the Manual on Uniform Traffic Control Devices (MUTCD).