

## Electrical Utility Energized Work Permit (EUEWP) – BP #243

### Background:

In alignment with NFPA 70E's requirement for utilizing an Energized Electrical Work Permit (EEWP), this Best Practice is developed to extend the same concept to electric utility systems. (Reference BP #223) There is a distinct difference between working energized while on commercial and industrial electrical systems versus being exposed to energized hazards on High Voltage (HV) and Medium Voltage (MV) electric utility systems. The unique risks and regulatory requirements have presented a necessity to create a method to capture and document the hazards, procedures, tasks, and authorization to properly apply safe work methods to energized utility system work.

### When Required:

When work is performed on an energized transmission or distribution system, an EUEWP shall be required and documented under the any of following conditions:

- (1) When work is performed within the minimum approach distance.
  - a. NOTE: Under no scenario shall an unqualified person work within the minimum approach distance for unqualified persons.
- (2) Racking breakers that are not in an electrically safe work condition.

### Exemptions to Electrical Utility Energized Work Permit.

Electrical work shall be permitted without an energized work permit if a qualified person is provided with and uses appropriate safe work practices and personal protective equipment (PPE) under any of the following conditions:

- (1) Testing, troubleshooting, or voltage measuring under 750VAC (follow site-specific requirements for energized work under 750VAC).
- (2) Thermography, ultrasound, or visual inspections if the minimum approach distance is not crossed.
- (3) Access to and egress from an area with energized electrical equipment if no electrical work is performed and the minimum approach distance is not crossed.
- (4) General housekeeping and miscellaneous non-electrical tasks if the minimum approach distance is not crossed.
- (5) Any process to establish a de-energized system. Examples include operating isolation devices, establishing an equipotential zone, and hanging grounds.

### **Justification for working isolated and insulated:**

- (1) Additional Hazards or Increased Risk.** Energized work shall be permitted where the employer can demonstrate that de-energizing introduces additional hazards or increased risk.
- (2) Infeasibility.** Energized work shall be permitted where the employer can demonstrate that the task to be performed is infeasible in a de-energized state due to equipment design or operational limitations.

### **Elements of the EUEWP**

The work permit shall include, but not be limited to, the following items:

- (1) Description of the circuit and equipment to be worked on and its location
- (2) Description of the work to be performed
- (3) Justification for why the work must be performed in an energized condition
- (4) Description of the safe work practices to be employed
- (5) Results of the shock risk assessment
  - a. Voltage to which personnel will be exposed
  - b. Minimum approach distance for qualified persons
  - c. Minimum approach distance for unqualified persons
  - d. Personal and other protective equipment required to safely perform the assigned task and to protect against the shock hazard
- (6) Results of the arc flash risk assessment
  - a. Available incident energy at the working distance or arc flash PPE category
  - b. Personal and other protective equipment required to protect against the arc flash hazard
  - c. Arc flash boundary
- (7) Means employed to restrict the access of unqualified persons from the work area.
- (8) Evidence of completion of a job briefing, including a discussion of any job-specific hazards.
- (9) Energized work approval (authorizing or responsible management, safety officer, or owner, etc.) signature(s).