

Why Should Municipalities Care About Energized Electrical Work Permits

1. What is an Energized Electrical Work Permit (EEWP)?

- **CSA Standard Z462** defines an EEWP as a document which captures:
 - **Description** of the work to be performed and electrical circuits involved,
 - **Justification** for performing the work live (or “energized”),
 - Results of Shock and Arc Flash **Risk Assessments**,
 - Authorizing **management signature**.

2. When should Municipalities use an EEWP?

- CSA Z462 states that an **EEWP is required whenever work is to be performed on live (or energized) electrical circuits**, with some exceptions:
 - Testing, Troubleshooting or voltage testing,
 - Visual, thermography or ultrasound inspections if the restricted approach boundary is not crossed.

3. What Should You Do About It?

- Check** that all staff and contractor electricians create Z462-compliant **EEWPs** prior to performing energized electrical work.
- Confirm** that a process is in place to have **authorized management approval of all EEWPs**
- Confirm** that all approved EEWPs are stored and accessible to prove **compliance** in case of **audit or incident**.



Read our [Case Study](#) to learn how London Health Sciences handles Workplace Electrical Safety.

Job Safety Plan Energized Electrical Work Permit

Worker: User Test
Plant: NT Demo
Equipment: 7225000, Distribution Panel, 600VDC, DP2A-3304 Process Filters, Bldg1; Floor 3
Task: Breaker Installation-Replacement – Panelboards
Work Order Number: WO-123

Work Energized: Yes

Justification to work Energized: Hazardous materials ventilation system cannot be de-energized.

Shock Risk Assessment

Identify Shock Hazard 600VDC
Direct Contact

Shock Risk Assessment Matrix

| Likelihood of occurrence of injury | Severity | |
|------------------------------------|------------------|------------------|
| | Voltage ≤ 30.0 V | Voltage > 30.0 V |
| Improbable | Low | Low |
| Possible | Low | High |

Is safety risk present? Yes

Hierarchy of Risk Control

Elimination No
 Substitution No
 Engineering Controls No
 Administrative Controls No
 Personal Protective Equipment Yes

Limit of Approach
 Limited Approach Boundary: 1.0 m (3 ft 6 in)
 Restricted Approach Boundary: 0.3 m (1 ft 0 in)

Necessary shock PPE to safely perform the assigned task
 Class of Gloves: Class 00 (Beige)

Arc Flash Risk Assessment

Identify Arc Flash Hazard Shock and Arc Flash Label: Yes

Arc Flash Hazard Information

Incident energy (cal/cm²): 1 cal/cm²
 At working distance of (in): 4
 Flash Protection Boundary (in): 15
 Available Fault Current (kA): 25
 Circuit Isolation Device:
 Circuit Protective Device: Field Verify
 OCD Clearing Time/Arc Duration (s): 0.03
 AF Analysis date: July 08, 2019

Arc Flash Risk Assessment Matrix

| Likelihood of occurrence of injury | Severity | |
|------------------------------------|----------------------------------|----------------------------------|
| | Energy ≤ 1.2 cal/cm ² | Energy > 1.2 cal/cm ² |
| Improbable | Low | Low |
| Possible | Low | High |

Is safety risk present? Yes

Hierarchy of Risk Control

Elimination No
 Substitution No
 Engineering Controls No
 Administrative Controls No

Personal Protective Equipment Yes

| | | |
|---|----------------------------|----|
| Arc Flash Risk Assessment Result | Incident Energy (cal/cm2): | 1 |
| | Working Distance (in): | 4 |
| | Arc Flash Boundary (in): | 15 |

Required Arc Flash PPE

- Arc-rated clothing with an arc rating equal to or greater than the estimated incident energy
- Long-sleeve shirt and pants or coverall or arc flash suit (Selection of one in group is required)
- Arc-rated faceshield and arc-rated balaclava or arc flash suit hood (Selection of one in group is required)
- Arc-rated outerwear (e.g., jacket, parka, rainwear, hard hat liner) (As needed)
- Heavy duty leather gloves, arc-rated gloves or rubber insulating gloves with leather protectors (Selection of one in group is required)
- Class G or E hard hat
- Safety glasses or safety goggles (Selection of one in group is required)
- Hearing protection
- Leather footwear

Hazards and Mitigators

| | | |
|---|--|--|
| Equipment-related Hazard | Hazard: Open hole next work work space | Risk Assessment / Hierarchy of Methods: Barricaded and tagged hole |
| Non Electrical Hazard | - | |
| Special Precautions | - | |
| Task Name | Breaker Installation-Replacement – Panelboards | |
| Means employed to restrict the access of unqualified persons to the work area | Yes | |
| Agree this task can be completed safely | Yes | |
| Job Briefing is complete including discussion of any job related hazards | Yes | |
| Hazard/Mitigator acknowledged | Yes | |
| A documented job procedure is available to complete this task | Yes | |

JSP Sign Off

JSP Number 69034

Worker Signature



JSP Submitted by: User Test
Submitted date: January 17, 2023 06:18 PM
JSP email recipient: support@eworksafe.ca

Supervisor Signature



JSP Approved by: Supervisor Test
Approved date: January 17, 2023 01:19 PM
JSP email recipient: support@eworksafe.ca