

# Why Should Health & Safety Professionals Care About Energized Electrical Work Permits

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

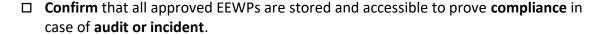
- CSA Standard Z462 defines an EEWP as a document which captures:
  - o **Description** of the work to be performed and electrical circuits involved,
  - Justification for performing the work live (or "energized"),
  - Results of Shock and Arc Flash Risk Assessments,
  - Authorizing management signature.

# 2. When should Health & Safety Professional 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?

<b>Check</b> that all staff and contractor electricians create Z462-compliant <b>EEWPs</b> prior to performing energized electrical work.
Confirm that a process is in place to have authorized management approval of all EEWPs





Read our <u>Case Study</u> 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	Severity		
injury	Energy ≤ 1.2 cal/cm2	Energy > 1.2 cal/cm2	
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

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Personal Protective Equipment Yes

Arc Flash Risk Assessment Result Incident Energy (cal/cm2):

4 Working Distance (in): Arc Flash Boundary (in): 15

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#### 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 Yes

work area

Agree this task can be completed safely Yes Job Briefing is complete including discussion of any job related

Yes hazards Hazard/Mitigator acknowledged Yes

A documented job procedure is available to complete this task Yes

# JSP Sign Off

JSP Number 69034

## Worker Signature

1/ce

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

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