

This reference guide applies to situations where work can only be performed while electrical systems remain energized. This applies to work performed on campus and/or at UCI leased properties. It is the responsibility of the vendor/contractor and/or UCI employee to ensure that all UCI and CalOSHA requirements are followed.

The assigned Project Manager (from Facilities Management, D&CS or other campus organization) is responsible for ensuring all applicable energized electrical work requirements are followed and that all applicable documentation is available and provided to EHS upon request.

Energized electrical work should only be performed when equipment cannot be de-energized and locked out. At no time should an individual work on energized systems if they are not a Qualified Person¹ as defined by CalOSHA and the National Electric Code.

Energized Electrical Work Requirements

Energized electrical work is defined as work conducted on equipment that has not been de-energized. In the University work environment, a Qualified Person may have to work on an energized circuit to troubleshoot equipment while it is running or has to be running in order to make sure that equipment calibration or tuning is being completed correctly. While it is uncommon, there are certain situations when work may need to be performed on an energized part of system. CalOSHA allows for energized electrical work to be performed, but only in limited situations, as described below:

CalOSHA allows work on energized electrical parts under **TWO** circumstances:

Circumstances	Examples
1. When de-energizing the circuit will introduce additional or increased hazards.	This would include: <ul style="list-style-type: none"> • Interruption of life support equipment • Deactivation of emergency alarm systems • Shutdown of hazardous location ventilation equipment • Removal of illumination of an area
2. When de-energizing the circuit is not feasible due to equipment design or operational limitations.	This would include: <ul style="list-style-type: none"> • Testing voltage on circuits or working on circuits that are part of a continuous process that would otherwise need to be completely shut down in order to de-energize the circuit • Troubleshooting tasks that must be accomplished with equipment energized • Tuning or calibration of equipment

General Requirements:

The following procedures apply when energized electrical work is conducted:

- The area should be cordoned off, providing notification to individuals in the area that live, energized work is being performed.
- Energized electrical work should be approved by the area supervisor.

- An energized electrical work permit should be completed, reviewed by the area supervisor, and posted before any energized electrical work is initiated.
- The work should be performed by an electrically Qualified Person with authorization from their supervisor.
- If the energized electrical work is occurring on high voltage (600 volts or above) equipment:
 - Only Qualified (High Voltage) Electrical Workers² are permitted to work on equipment.
 - An observer is required. The observer shall be a Qualified Person.
- Qualified Electrical Workers should follow written procedures and use protective measures and procedures while performing energized electrical work.

¹Definition of a “Qualified Person”: A **Qualified Person** is a person designated by the employer, who by reason of training, experience or instruction has demonstrated the ability to safely perform all assigned duties and, when required, is properly licensed in accordance with federal, state, or local laws and regulations. This individual shall possess the skills, knowledge, and experience related to the construction and operation of the **electrical** equipment and installation and has received safety training on the hazards.

²Definition of a “Qualified Electrical Worker”: A **Qualified Electrical Worker** is a person who by reason of a minimum of two years of training and experience with high voltage circuits (over 600 volts) and equipment has demonstrated familiarity with the work to be performed and the hazards involved. This individual shall possess the skills, knowledge, and experience to work on high voltage and is permitted to work on or near exposed energized parts, shall, at a minimum, be **trained** in and familiar with the skills and techniques necessary to distinguish exposed live parts from other parts of **electric** equipment.

Prior to Work Requirements:

The supervisor and electrically Qualified Person will complete the Energized Electrical Work Permit and submit to EHS at safety@uci.edu prior to the initiation of work. Notification and submission of this permit should occur for all instances, including emergency work performed during evenings and weekends.

After Energized Electrical Work is completed, please submit copy of permit to EHS at safety@uci.edu.

If you have any questions related to the requirements outlined in this reference guide, please contact EHS at (949) 824-6200 or email safety@uci.edu.

ENERGIZED ELECTRICAL WORK PERMIT

Updated: 04/13/21

Part I: TO BE COMPLETED BY THE SUPERVISOR ASSIGNING WORK

Date:	
Job/Work Order Number:	
Building/Room Number:	

(1) Description of the circuit/equipment/job location:	
(2) Description of the work to be completed:	
(3) Justification why the circuit/equipment cannot be de-energized, or work cannot be deferred until the next scheduled outage:	
(4) Date's work scheduled for:	

Supervisor Assigning Work (print/sign)

Date

PART II: TO BE COMPLETED BY THE ELECTRICALLY QUALIFIED PERSONS PERFORMING THE WORK

	Check when completed:
(1) Detail job description procedure to be used in performing the above detailed work:	<input type="checkbox"/>
(2) Description of the safe work practices to be employed:	<input type="checkbox"/>
Result of shock risk assessment:	
(a) Voltage to which personnel will be exposed	<input type="checkbox"/>
(b) Limited approach boundary	<input type="checkbox"/>
(c) Restricted approach boundary	<input type="checkbox"/>
(d) Necessary shock	<input type="checkbox"/>
(e) PPE to safely perform assigned tasks	<input type="checkbox"/>
Result of the arc flash risk assessment:	
(a) Available incident energy at the working distance or arc flash PPE category	<input type="checkbox"/>
(b) Necessary arc flash personal and other protective equipment to safely perform the assigned task	<input type="checkbox"/>
(c) Arc flash boundary	<input type="checkbox"/>
(3) Means employed to restrict the access of unqualified persons from the work area:	<input type="checkbox"/>
(4) Evidence of completion of a job briefing, including a discussion of any job-related hazards:	<input type="checkbox"/>
(5) Do you agree the above-described work can be done safely?	<input type="checkbox"/> YES <input type="checkbox"/> NO (If no, return to supervisor)

Electrically Qualified Person(s)

Date

Electrically Qualified Person(s)

Date

PART III: APPROVAL(S) TO PERFORM THE WORK WHILE ELECTRONICALLY ENERGIZED:

Environmental Health and Safety

Date

Manager/Qualified Supervisor

Date

Note: Once the work is complete, provide a copy of this permit to EHS.at safety@uci.edu.