

This procedure applies to situations where work can only be performed while electrical systems remain energized. This applies to work performed at UC Riverside owned, operated, and leased properties. The assigned Project Manager (from Facilities Management, Planning, Design, & Construction (PD&C) or other campus organizations) is responsible for ensuring vendor/contractors are aware of and follow all applicable energized electrical work requirements and that all applicable documentation is available and provided to EH&S upon request. Vendors and contractors are required to comply with all UCR policies, Cal/OSHA regulations, and the California Electrical Code.

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 Cal/OSHA and the California Electrical 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 test, troubleshoot, adjust, tune, or calibrate equipment while it is running to ensure that equipment is operating correctly. While it is uncommon, there are certain situations when work may need to be performed on an energized part of the system. Cal/OSHA allows for energized electrical work to be performed, but only in limited situations, as described below:

Cal/OSHA 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: • 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: • Testing voltage on circuits or working on circuits that are part of a continuous process that would otherwise need to be completely shut down 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 where live energized work is being performed.
- Energized electrical work must be approved by the Facilities Electrical Shop Supervisor.
- An energized electrical work permit must be completed, reviewed by the area supervisor, The Facilities Electrical Shop Supervisor, and be available onsite before any energized electrical work is initiated.
- The work should be performed by a Qualified Person with authorization from the Electrical Shop 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 that equipment.
 - An observer is required. The observer shall be a Qualified Person.
- Qualified Electrical Workers should follow written procedures and use protective measures and PPE.

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 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 Facilities Services Electrical Shop Supervisor and the Qualified Person will complete the Energized Electrical Work Permit and submit a copy to EH&S at tracy.stark@ucr.edu prior to the start of work. Notification and submission of this permit should occur in all instances, including emergency work performed during evenings and weekends.

If you have any questions related to the requirements outlined in this reference guide, please contact EHS at (951) 827-5118 or email tracy.stark@ucr.edu.

Part I: TO BE COMPLETED BY THE SUPERVISOR ASSIGNING WORK

Date	
Job/Work Order Number	
Location - Building and Room Number	

(1) Description of the circuit/equipment/or 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 is scheduled for or ongoing PM:	

Supervisor Assigning Work (print/sign)

Date
PART II: TO BE COMPLETED BY THE QEW PERFORMING THE WORK

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

QEW Name

QEW Signature

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

FS Electrical Supervisor Name

Signature

Date

Note: Once the permit is approved, provide a copy to EH&S at tracy.stark@ucr.edu.