

HFRA Hot Work Restriction & Mitigation Measures

The objective of this program is to implement additional measures to help mitigate against crew/equipment caused fire ignitions in high fire risk areas (HFRA) and to bring further heightened awareness to the inherent dangers around conducting field work that could generate a spark/arc or create an ignition while working in HFRA.

This program requires SCE employees and contractors to adhere to additional precautionary safe work practices at all times when performing hot work activities in HFRA that may cause arcs, sparks, flames and/or significant heat sources which could lead to an ignition. Additionally, this program requires SCE employees and contractors to postpone non-emergency work that involves hot work activities during elevated and extreme fire weather threat conditions to help prevent a wildfire that could be difficult to suppress.

Hot work activities are defined as construction or maintenance activities that can initiate a fire or generate potential ignition sources. These activities include traditional hot work activities pursuant to SCE's [Hot Work Program](#), which include the following:

- Metal cutting and grinding
- Welding
- Burning
- Oxygen and arc cutting
- Open flame soldering
- Brazing
- Pipe thawing
- Torch applied roofing
- Thermal spraying

Region managers (Distribution), regional construction managers (Distribution), district managers (Distribution), grid managers (Transmission), operations managers (Vegetation Management), field supervisors, and other OU leadership with oversight of field work (e.g., Generation, IT, CRE, etc.) are responsible for ensuring that SCE field personnel comply with this program and that their contractors are aware of their obligation to train their crews in the requirements of this program and validate that they have the required tools/equipment to comply with the mitigations listed below.

HFRA Hot Work Restriction and Mitigation Measures

SCE employees and contractors shall comply with **ALL** the following fire mitigation practices whenever conducting hot work activities in SCE's HFRA:

1. Conduct a pre-job plan/tailboard to identify work activities that would have the potential for causing a fire and an action plan to mitigate them;
2. Work that could cause a fire shall be performed under the direct observation of the crew foreman or site lead;
3. Hot work permits (where applicable at SCE locations/facilities) are in place prior to commencing work;
4. One or more of the following mitigations must be in place when conducting hot work activities:
 - a. A minimum 10 ft. radius** of the ground around the central hot work activity area shall be generously sprayed with water (or approved wetting agent) using water backpack or other

- means and reapplied as needed to ensure any vegetation or potential ignition risks remain damp throughout the duration of hot work, **OR**
- b. A minimum 10 ft. radius** of the ground around the central hot work activity area shall be cleared to mineral earth/dirt (local agency/jurisdiction permitting), **OR**
 - c. A welding tent, fire/blast/arc blankets, and/or metal shield surrounding the hot work must be deployed;
5. The crew is able to maintain adequate communications (900 MHz, cellular, satellite, etc.) if coverage is available;
 6. Work vehicle(s) must be equipped with, at minimum, the following fire suppression equipment: shovel, McLeod or heavy-duty metal rake, completely filled water backpack (minimum 5 gal. capacity), and ABC fire extinguisher (min. 5 lb. capacity). Such equipment must be readily available and placed near the work being performed to enable an immediate response to an incipient ignition;
 7. Care should always be taken not to park or drive vehicles on dry grass, leaves, or brush, **AND:**
 8. All switching operations shall comply with [System Operating Bulletin 322 \(SOB 322\)](#).

**Protected area may be adjusted to account for wind or other environmental/site conditions as deemed necessary by foreman/site lead to ensure appropriate ignition mitigation.

Vegetation Management contractors shall also adhere to their approved SCE Contractor Hazard Assessment and Safety Plan, which provide additional mitigation measures and requirements specific to their work scope and activities.

Additionally, all field work performed within the boundaries of the United States Forest Service (USFS) shall comply with the USFS Master Special Use Permit and Operations and Maintenance Plan Appendix "F" (Fire Plan), which outlines responsibilities for fire prevention and extinguishment of fires that inadvertently start from utility operations and maintenance (O&M) activities on forest lands. The provisions in the Fire Plan also specify conditions under which O&M activities are authorized to occur, identify a system for determining fire risk, and detail conditions under which O&M activities will be curtailed or shut down. Lastly, SCE employees and contractors shall comply with all applicable federal, state, and local fire safety regulations.

Primary and Secondary Line Work and Switching

Although primary and secondary line work and switching are generally not considered traditional hot work activities, field crews should be prepared for the unexpected, such as accidents and/or equipment malfunction that could generate sparks or incandescent particles. All of the mitigations noted above, with the exception of #4, shall be in place when performing the following line work and switching activities in HFRA. However, mitigation #4 should be employed if the line work and switching activities are *expected* to generate sparks or incandescent particles.

- Manual operation of energized electrical devices
- Energizing or de-energizing lines or equipment
- Opening or closing taps or fuses on energized electrical equipment
- Clearing foreign objects/vegetation in contact with energized lines
- Installing or removing protective covers on energized lines or equipment
- Working on energized secondaries or services

Additional Field Work Restrictions During Elevated and Extreme Fire Weather Threat Conditions (PSPS Events):

During elevated or extreme fire weather threat conditions, SCE's incident commander may elect to activate an incident management team (IMT) to oversee its Public Safety Power Shutoff (PSPS) protocol. Special precautions must be taken during these events as vegetation will be particularly susceptible to ignition and a resulting fire could be difficult to suppress.

Hot work activity on or near circuits subject to PSPS: When working on or near circuits *under consideration for or de-energized due to* a PSPS event, all non-emergency work involving hot work activities on such circuits shall be cancelled during the period of concern and subsequently rescheduled when conditions improve. Emergency work (remediating conditions that represent immediate threats to public safety, electric reliability, or property) may only be performed if the above safe work practices (#1 - #8) are met. These restrictions shall apply to all SCE employees and contractors working in the areas of concern.

Note: If there are changes to the forecast and circuits are added to the PSPS monitoring list with a period of concern that is concurrent to hot work activities being performed, work must be safely stopped. Requested exceptions shall be provided to the PSPS IMT incident commander for review and approval along with the appropriate justifications and described mitigations. The crew foreman or site lead is responsible for ensuring adherence to these guidelines at all times, including situational awareness of HFRA boundaries and any current PSPS event activity.

Exceptions to the restrictions/mitigations noted above:

- If the hot work is confined to an area devoid of flammable or combustible materials (e.g., parking lot, commercial area, irrigated/maintained agricultural lands, bare mineral rock/earth, work indoors, etc.), OR
- If it is actively raining, or has recently rained, and the ground and vegetation near the work area is saturated during hot work activities (reassessment required if rain ceases and fuels begin to dry out), OR
- Work that does not have the potential to generate arcs, sparks, flames or high-heat sources and cannot ignite a fire, OR
- When a circuit is de-energized due to PSPS and repairs to any identified priority notifications are needed, work may be performed to conduct such repairs so long as the remediation activities do not have the possibility of causing an ignition.

How to Identify HFRA and Circuits Subject to PSPS

Maintaining situational awareness about which areas are considered high fire risk and subject to PSPS is a critical part of this program. The link below will take you to SCE's public "Power Outage Awareness Map" tool (Figure 1 below) where you can enter the nearest address (1) in order to determine if you are in a HFRA or working (or planning to work) on a circuit under consideration for or de-energized due to PSPS. Click on the 'Apply Filters' (2) widget on the interactive outage map, select 'High Fire Risk Areas' (3), and 'Apply Filter' (4) to see if the area of concern is in HFRA or subject to PSPS.

Link: [Current Power Outages](#) | [Outage Center](#) | [Home - SCE](#)

The screenshot displays the SCE Power Outage Awareness Map interface. At the top, there is a search bar (1) and a search button. Below the search bar, there are several sections: 'Current Outages' (84 Outages | 4,457 Customers Impacted), 'Upcoming Scheduled Outages' (1,329 Outages Scheduled | 63,703 Customers Possibly Impacted), 'Public Safety Power Shutoff (PSPS)', 'Not Seeing Your Outage?' (with a 'Report' button), and 'Outage Alerts' (with a 'Get Alerts >' button). On the right side, there is a map with a 'Map Filters' overlay (2). The 'Map Filters' overlay includes options for 'Outages', 'Scheduled Outages', 'Public Safety Power Shutoff', 'Community Resource Centers', 'Community Crew Vehicles', 'High Fire Risk Areas' (3), and an 'Apply Filters >' button (4).

Figure 1

Fire Monitoring and Patrol

All SCE field operating organizations should always remain vigilant and alert for fires or possible fires while working or traveling in HFRA. Any identified fires must be immediately reported to 911 and the appropriate Switching Center or Control Center as soon as possible:

- Transmission and Distribution employees (including Vegetation Management) will notify the local switching center
- IT and Transmission Telecom employees will notify the Telecommunications Control Center
- Corporate Real Estate, Environmental Services, and Corporate Security employees will notify the Edison Security Operations Center
- Generation employees will notify Generation dispatch
- Contractors must also notify their Edison representative

Additionally, Red Flag Fire Patrol magnetic or vinyl signs should be displayed on designated vehicles when operating in SCE's HFRA during a Red Flag Warning (Magnetic = SAP #10212566 / Vinyl = SAP #10212567).

Recommended Fire Prevention Practices for Job Tailboards

Tailboards are a critical first step to ensure all supervisors and members of each crew involved in a job thoroughly understand the work to be performed and the method of accomplishing it in a safe manner. Before the start of each job, or in the event the scope of the job changes, every supervisor/job lead shall call his/her crew together and outline the proper work procedures/methods, roles and responsibilities, and possible hazards in order to conduct the work safely and minimize the risk of an ignition.

Below you will find a collection of best practices from CAL FIRE's Fire Prevention Field Guide, USFS Operations and Maintenance Plan for Electric Facilities, and other sources that can be used during the job tailboard when covering fire hazards and mitigations specific to the work being performed and job location.

- ✓ Select tools in good working order and work methods that minimize or eliminate arcs/sparks, if possible
- ✓ Select tools with mechanisms that do not create sparks or excessive heat when in use (e.g., hydraulic cable/bolt cutters) and avoid those that do (e.g., reciprocating saw)
- ✓ If arcs/sparks are unavoidable, ensure the work area is wetted down as required and utilize fire/welding blankets for added protection from heat sources
- ✓ Designate a Fire Watch, a person responsible for observing the hot work, monitoring conditions to ensure that a fire does not occur, stopping work if unsafe conditions develop, and immediately responding should an ignition occur
- ✓ Designate a Swamper, a person responsible for keeping the ground wetted under the hot work location as needed throughout the job
- ✓ Fire suppression tools and equipment should be kept directly accessible to workers at all times
- ✓ Carefully assess the terrain, vegetation, and access routes around and leading to the job location for hazards that may prevent the suppression of an incipient stage fire
- ✓ Ensure fire extinguishers are fully charged, water backpacks are full, and batteries are charged (if using battery powered sprayers)
- ✓ Ensure an adequate supply of water is available based on job size/type to ensure the area is wetted down appropriately throughout the day and water backpacks remain full
- ✓ Periodically inspect fire suppression equipment and tools to ensure they are in good repair and can be relied upon when needed
- ✓ Road grading or heavy brush removal requiring the use of heavy equipment should have a fire plan specific to the location and job objectives
- ✓ Mowing brush and small ingrowth trees to maintain previously cleared corridors should have a spotter in front of the mowing path to ensure rocks and other debris are removed prior to clearing
- ✓ If using gasoline-powered equipment, regularly check the spark arrestor to ensure carbon and/or oil buildup is removed and there are no holes in the arrestor screen
- ✓ When refueling equipment: Allow the equipment to cool for at least 5 minutes, only refuel over a non-combustible surface or approved fire barrier, SLOWLY open fuel tank to release pressure, and cease hot work during refueling; never rest hot equipment down on dry fuels
- ✓ Smoking is not permitted except in a barren area or in an area cleared to mineral soil at least 3 feet in diameter (PRC 4423.4)