



**KINGS COUNTY  
FIRE DEPARTMENT  
COMMUNITY RISK REDUCTION  
280 Campus Drive, Hanford, CA 93230  
P (559) 852-2885 • F (559) 582-8261  
*"Education, Engineering, and Enforcement"*  
William Lynch, Fire Chief  
Blake Adney, Fire Marshal**

**PHOTOVOLTAIC SOLAR PANEL  
ADDITIONAL REQUIREMENTS**

The following information shall be provided on the title page, along with three sets of 24 x 36 inch plans. All plans shall comply with the California Fire Code and all regulations of the Kings County Fire Department.

- A. Project location, including the full legal address of the facility, and building number(s) if applicable; tract or parcel number.
- B. The contractor's name, telephone number, address and California State contractor's license number and classification.
  - 1. Identify the fire extinguisher locations, type and size, mounting style and height above finished floor. Must have a California State Fire Marshal service tag affixed to them.
  - 2. Show all roadways. Show the current property vehicle access points as well as the proposed vehicle access points for this project.
  - 3. Show the location and width of the fire apparatus access lanes.

**Additional Requirements.**

The following additional requirements may be needed in order to obtain approval by the Kings County Fire Department of an application for a permit to build a photovoltaic solar panel facility. The Kings County Fire Department reserves the right to amend existing comments or requirements or add additional comments or requirements depending upon the hazards involved with an individual project(s).

**NOTE - Satisfying the below requirements does not automatically mean your plans will be approved.**

- 1. Access Roads
  - a) The engineering designs of all life safety and fire suppression roads shall be reviewed by the Kings County Public Works Department and approved by KCFD.
  - b) Life safety and fire suppression access roads shall be not less than 20 feet in width around the perimeter of the site and shall include interior fire access roads of not less than 20 feet in width that are spaced so that there is not greater than 400 feet in separation between fire access roads on the interior of the site.
  - c) Life safety and fire suppression access roads shall be designed, engineered, and maintained to be an all-weather surface capable of supporting the imposed loads of a sixty-five thousand (65,000) pound fire apparatus with a maximum grade of 12 percent.
  - d) There shall be an unobstructed vertical clearance of 13 feet 6 inches above all life safety and fire suppression access roads.

- e) If an access road is a dead end road, the access road shall include either a 50 foot radius at the end of the road or other KCFD approved turn around space.
- f) There shall be a minimum of 4 feet of separation between rows to allow access for fire suppression personnel and equipment.
- g) Facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved Life Safety and Fire Suppression access roads/entrances. It should be noted that if the developer chooses to fund the purchase of an all-terrain firefighting vehicle this requirement is still needed since due to the size of the structure more than one firefighting vehicle would be needed.
- h) At the sole discretion of the Kings County Fire Chief or his or her designee, an applicant may request to satisfy the above requirements regarding interior fire access roads by:
  - 1) Providing funds sufficient to purchase an all-terrain firefighting vehicle of a model, cost, conditions, and equipment as specified by the Kings County Fire Department.
  - 2) Providing funds to be held in a special account to pay for the purchase, maintenance, repair, or replacement of an all-terrain firefighting vehicle as set forth, above. The amount of funds to be provided shall be set by the Kings County Fire Department as an amount equal to the pro rata share of the cost of purchasing a new vehicle based upon the acreage of the solar project, as well as any other factors deemed pertinent including, but not limited to, the project's proximity to other solar projects, agricultural or residential developments, or fire stations.

## 2. Fire Suppression Systems and Access to Water

- a) Any fire suppression systems will need to meet all applicable State and Kings County Fire Department requirements.
- b) The fire protection system, including fixed and portable extinguishing systems, must be up to date on required annual fire inspections and tests and be approved by the Kings County Fire Department.
- c) The Fire Department may require a supply of firefighting water available in a storage tank(s) on site. The amount of water required and any required connections shall be in accordance with NFPA 1142 and the Kings County Fire Department. The tank shall be equipped with a pressure system and float valve device to keep the tank full at all times.

## 3. Gates and Address Numbers

- a) Four-inch reflective address numbers at the main street side entrance shall be installed pursuant to Section 505.1 of the California Fire code.
- b) Where gates are provided, a means of Fire Department entry shall be provided. Manual gates shall have a Fire Department Knox key lock provided. Powered gates shall be provided with a Fire Department Knox access override system. Gates shall open inward and gate entrances shall be 4 feet wider than the lane serving the gate and be located a minimum of 30 feet from the roadway to allow a vehicle to stop without obstructing traffic. A Knox pad lock shall be placed on chained gates or Knox box with gate access keys mounted at the main entrance for Fire Department access.

4. On-site Fire Extinguishers

- a) There will be a minimum rated 4A60BC Fire Extinguisher located at each inverter pad and transformer pad, mounted on a bollard protected from the weather or in a cabinet. All extinguishers shall be mounted with securely fastened hangers so that the weight of the Extinguisher is adequately supported, and at a height compliant with the California Fire Code. Additional extinguishers may be required based upon special hazards or conditions. These extinguishers must be maintained per California Fire Code.
- b) Minimum of one fire extinguisher shall be on site during construction of the facility. The required number and type of extinguishers on site during construction will vary by size of the facility.
- c) Employees shall be familiar with the use of fire safety equipment.

5. On-Site Battery Storage Units or Devices

The addition of battery storage units or devices will trigger additional Fire Department requirements dependent upon the battery technology and design selection employed. Requirements may include but shall not be limited to, the purchase of specialized hazmat vehicles and equipment along with mandated training of Fire Department personnel.

6. Training regarding interruption of electrical power supply

Subject to Fire Marshal approval, applicant shall provide training for fire personnel to be able to interrupt electrical power safely for emergency incidents requiring fire suppression or rescue activities.

7. Maintenance of Site

- a) Areas within the solar array must be maintained free of flammable materials; annual vegetation must be maintained at a height of less than four inches.
- b) A clear, brush-free area of ten feet (thirty feet in the SRA) shall be required around ground-mounted photovoltaic arrays. This area shall also be cleared of all dry grass, weeds, rubbish, trash, litter, tires, tree stumps, and other waste material, or any flammable material.