

Standard No. 1204-2		
Kern County Fire Department Fire Prevention 	Solar Panels Ground Mounted (Commercial) Fire Protection Requirements	 <hr/> Fire Marshal Date: May 25, 2023

Scope

This standard is for the requirements and construction of commercial ground mounted solar installations and is pursuant to the 2022 California Fire Code and Kern County Ordinance.

Requirements

This standard uses guidelines from several sources which outline solar panel installation requirements. This standard will be associated with the proper installation of photovoltaic ground mounted solar systems. It will be applied indefinitely and reviewed/revised as part of the new code adoption process or as otherwise necessary.

Water Supply

When required by the fire code official, fire protection water shall be provided for ground mounted solar systems of one MW or larger. The presence of structures, location in the wildland areas, and the size of the array will determine the amount of fire protection water.

One 10,000-gallon tank with a 4" NSM (National Standard Male) connection will be provided for fire department use. A level indicator shall be attached to the water tank. Tank and outlet location shall be accessible to emergency vehicles, near the entrance and approved by the Kern County Fire Department. Water tank design, materials, fabrication, and installation shall be in accordance with NFPA 22. Submit plans and obtain a building permit from the Kern County Public Works Inspection Division for water tanks that exceed 5,000 gallons. (2022 CBC Section 105)

When a fire water source is available within a reasonable distance, the fire water tank requirement may be waived. This fire water source must have a 4" NSM (National Standard Male) connection. All water sources shall be approved by the Kern County Fire Department.

Clearance/Combustibles

1. A minimum clearance of 10' is required for all weeds and combustibles around the project perimeter. All vegetation under the array shall be maintained to a height of 6" or less.
2. In SRA and Wildland areas, 30' of clearance of all combustibles shall be maintained.

Access

1. A 20' minimum road width- is required around the perimeter of the entire project for the fire department and emergency vehicles.
2. All internal roads shall be a minimum of 20' wide.
3. Fire apparatus access roads shall be constructed with an asphalt, concrete, or other approved driving surface capable of supporting the imposed load of fire apparatus weighing up to 75,000 pounds.
4. Separations and clear spaces between solar panel array blocks and/or other associated equipment on the interior of the solar array that are twelve (12) feet or larger in width shall be provided with a compacted surface capable of supporting the imposed load of fire apparatus weighing up to 20,000 pounds.