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## 2013 Code Changes for Photovoltaic Systems (Residential)

### 2013 California Residential Code

#### New Requirements:

1. Does not apply to detached non-habitable Group U structures;
  - a) Parking or shade structures
  - b) Carports
  - c) Solar trellises
  
2. **Marking:** Interior and exterior direct current (DC) conduit, enclosures, raceways, cable assemblies, junction boxes and disconnects
  - a) Reflective
  - b) Weather resistant
  - c) Letters capitalized with a minimum height of 3/8 inch white on red background
  - d) *"WARNING: PHOTOVOLTAIC POWER SOURCE"*
  - e) Marking placed adjacent to the main service disconnect
  - f) Every 10 feet, within 1 foot of turns or bends and within 1 foot above and below penetrations of roof/ceiling assemblies, walls or barriers.
  
3. **Locations of DC Conductors**
  - a) As close as possible to the ridge, hip or valley and as directly as possible from an outside wall (to reduce tripping hazards)
  - b) Conduit runs between sub arrays and DC combiner boxes should be run in shortest path from the array to the DC combiner box. Minimize conduit runs in pathways between arrays.
  
4. **Access and pathways on the roof**
  - a) Hip roof layouts: provide a 3-foot wide clear access pathway from the eave to the ridge on each roof slope where panels/modules are located. Pathway must be a structurally strong location capable of supporting a firefighter. NOTE: This does not apply to roofs with slopes of 2:12 or less. **(Fig 1)**
  - b) Single Ridge: Panels/modules must be located to provide a 3 foot wide access pathway from the eave to the ridge on each roof slope. NOTE: This does not apply to roofs with slopes of 2:12 or less. **(Fig 2)**
  - c) Hips and Valleys: Panels/modules cannot be located closer than 18 inches to a hip or valley where the panel/modules are located on both sides of the hip or valley. NOTE: This does not apply to roofs with slopes of 2:12 or less. **(Fig 1)**
  
5. **Smoke ventilation:** Panels/modules cannot be located higher than 3 feet below the ridge.

