

Permit Requirements for Residential Solar Photovoltaic Systems

The following information and requirements are necessary for the issuance of permits for residential photovoltaic (PV) electrical systems. Please be sure applicants obtain the necessary approvals and submit the required document with their application.

- A) Approvals from Other Agencies:
 - a) Obtain a Zone Clearance from Planning Division for the photovoltaic panel arrays.
 - b) Obtain approval from Public Works Department for ground mounted units.

- B) Requirement for Building and Electrical Permits from the Building Division, Community Development Department:
 - a) Submit three (3) sets of plans for the photovoltaic module array.
 - b) Show the address of the project on the plans.
 - c) Provide a plot plan showing the footprint of the building and where the panel arrays are located.
 - d) Provide plans and specifications for the photovoltaic modules, panels, arrays and framing supports.
 - e) For roof mounted arrays:
 - 1) Show the array weight that will be added to the roof.
 - 2) Show the array supports, the roof penetrations and the connection to the roof-framing members.
 - 3) Identify the method of flashing and sealing of the roof penetrations.
 - 4) Provide engineering calculations for arrays weighing more than six (6) pounds per square foot to show that roof structural system will support the additional load or if not how framing will be added to provide additional required support.
 - f) For ground-mounted array:
 - 1) Show the array supports, framing members and foundation posts and footings.
 - 2) Provide engineering calculations for the supporting structure.

- g) A sign must be placed at the main service-entrance equipment showing the location of all on-site emergency and optional standby powers sources per California Electrical Code (C.E.C.) Article 700.8, 701.9, and 702.8.
- h) Provide copies of "cut sheets" from the manufacturer's brochure for the current inverter and photovoltaic modules.
- i) Provide line drawing of systems wiring. Show conductor and conduit size.
- j) Provide load calculations for circuits as required in C.E.C., Article 690.7, 690.8, and 690.9.
- k) Identify PV System type:
 - 1) Utility interactive or stand-alone
 - 2) With/without generator or battery backup
 - 3) Grounded or Ungrounded
 - 4) Micro Inverters on panels
- l) Identify where ground fault protection is provided per C.E.C. Article 690.5 and if it is part of the inverter or a separate means (stand-alone system).
- m) Each PV System Disconnect means shall be permanently marked to identify it as a Photovoltaic System Disconnect – C.E.C. Article 690-14(c)(2).
- n) Where terminals of the disconnecting means may be energized in the open position, a warning sign shall be mounted on or adjacent to the disconnecting means. The sign shall be clearly legible and have the following words or equivalent - C.E.C. Article 690.17

WARNING - ELECTRIC SHOCK HAZARD - DO NOT TOUCH
TERMINALS -TERMINALS ON BOTH THE LINES AND LOAD
SIDES MAY BE ENERGIZED IN THE OPEN POSITION.

- o) Provide signage at D.C. power source disconnect indicating: Operating current, Operating voltage, Maximum system voltage, Short-circuit current. C.E.C. Article 690.53
- p) Provide warning labels where required per article 690.35(f)

 <p>City of Thousand Oaks COMMUNITY DEVELOPMENT DEPARTMENT BUILDING DIVISION</p>  <p>Building Official</p>	PERMIT REQUIREMENTS FOR RESIDENTIAL SOLAR PHOTOVOLTAIC SYSTEMS	
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