



PV System Labeling Requirements

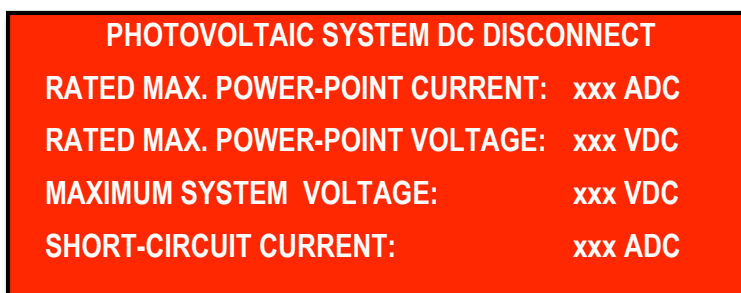
BEF has found that PV system labeling can be a point of confusion for many installers. In order to better support our installers we have compiled the following information. Labels are required to be a durable, unalterable material permanently attached to the device. The most common type of labeling is engraved or etched plastic, which can be riveted or adhered to the device.

DC Disconnect Labeling

NEC 690.53 – A permanent label for the direct-current photovoltaic power source indicating items (1) thru (5) shall be provided by the installer at the photovoltaic disconnecting means:

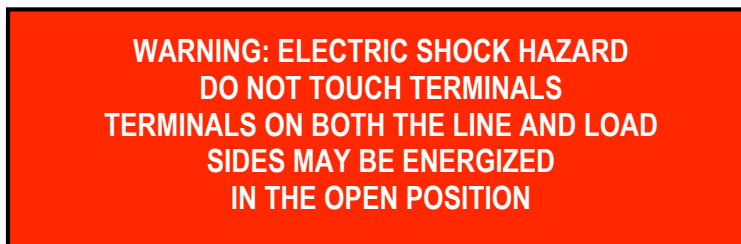
- 1) Rated maximum power-point current
- 2) Rated maximum power-point voltage
- 3) Maximum system voltage
- 4) Short-circuit current
- 5) Maximum rated output current of the charge controller (if installed)*

**Not included in most grid-tied systems*



DC Disconnect Labeling (continued)

NEC 690.17 – Where all 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.



According to 690.14(C)(2), if there is more than one PV system DC disconnect, they should also be labeled.



DC Junction boxes, combiner boxes, disconnects and devices

690.35[F] – The photovoltaic power source shall be labeled with the following warning at each junction box, combiner box, disconnect, and device where energized ungrounded circuits** may be exposed during service:

**WARNING
ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS
OF THIS PHOTOVOLTAIC SYSTEM ARE
UNGROUNDING AND MAY BE ENERGIZED**

**This applies to most modern grid tied inverters

AC Disconnect

690.14[C][2] – Each photovoltaic system disconnecting means shall be permanently marked to identify it as a photovoltaic system disconnect.

690.54 – All interactive system(s) points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as a power source and with the rated AC output current and the nominal operating AC voltage.

PHOTOVOLTAIC SYSTEM AC DISCONNECT

RATED AC OUTPUT CURRENT:	xxx AMPS
NOMINAL OPERATING AC VOLTAGE:	xxx VOLTS

Connection to AC Sub-Panel (Circuit Breaker)

690.14[C][2] & 690.54 as noted above.

**INTERACTIVE PHOTOVOLTAIC
SYSTEM CONNECTED**

RATED AC OUTPUT CURRENT:	xxx AMPS
NOMINAL OPERATING AC VOLTAGE:	xxx VOLTS

690.64[7] – Unless the panelboard is rated not less than the sum of the ampere ratings of all overcurrent protection devices supplying it, a connection in a



panelboard shall be positioned at the opposite (load) end from the input feeder location or main circuit location. The bus or conductor rating shall be sized for the loads connected in accordance with article 220. A permanent warning label shall be applied to the distribution equipment with the following or equivalent marking:

**WARNING: INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS OVERCURRENT DEVICE**

Inverter

NEC 690.5[C] – A warning label shall appear on the utility-interactive inverter or be applied by the installer near the ground-fault indicator at a visible location, stating the following:

**WARNING: ELECTRIC SHOCK HAZARD
IF A GROUND FAULT IS INDICATED, NORMALLY
GROUNDED CONDUCTORS MAY BE
UNGROUNDED AND ENERGIZED**

Primary Utility Meter

NEC 690.56 [B] – Facilities with Utility Services and PV Systems. Buildings or structures with both utility service and a photovoltaic system shall have a permanent plaque or directory providing the location of the service disconnecting means and the photovoltaic system disconnecting means if not located at the same location.

Sample (verify with local utility and AHJ requirements):

**INTERACTIVE PHOTOVOLTAIC
SYSTEM CONNECTED
PHOTOVOLTAIC SYSTEM DISCONNECT
LOCATED [Description of location relative
to the primary utility meter (& this plaque) location]**