LABELING REQUIREMENTS

Appendix E. Solar PV System Labeling Guidelines

Technical Bulletin: NYSERDA Solar Photovoltaic System Labeling Guidelines

Scope and Purpose

This document was prepared as part of NYSERDA's ongoing quality assurance (QA) for the NY-Sun Solar Photovoltaic (PV) program.

As part of this QA program, the Cadmus Group has performed approximately 3,000 inspections on solar PV systems installed in New York State since January 1, 2012. Many of these inspections have found issues related to incorrect, incomplete, or missing labels on installed equipment. The National Electrical Code® (NEC), OSHA and ANSI provide guidelines for required labels. However, these guidelines are not necessarily organized in an easy to use manner and make it difficult for system installers to get a clear picture of what is required labeling for solar PV systems.

The purpose of this document is to provide participating installers and other stakeholders with a summary of the required labels for the most common PV system configurations. While specific installations may have different labeling requirements, the labels included in this bulletin represent those required for solar PV systems under NYSERDA's QA program.

Unless otherwise noted, this bulletin is based on the 2014 edition of the National Electrical Code (NEC). The interpretations in this document are used by inspectors in the NY-Sun QA program.

Document Organization

This bulletin includes the following sections:

I. Label Construction, Placement, Color, and Marking

II. Label Descriptions and NEC References

- Arc-Flash Hazard Warning: NEC 110.16
- Directory/Identification of Power Sources: NEC 705.10, 225.37, 230.2(E), and 705.70
- Conductor Identification & Grouping: NEC 690.31(B), 200.6, 250.119, 310.110, and 690.31(B)
- Ground Fault Indication: NEC 690.5(C)
- Identification of PV Disconnects: NEC 690.13(B)
- Terminals Energized on Line & Load Sides of Disconnect in Open Position: NEC 690.17(E)
- Fuse servicing warning label: NEC 690.16(B)
- DC PV Source & Output Circuits Inside a Building: NEC 690.31(G) (3) & (4)
- Bipolar PV Systems: NEC 690.7(E)(3)
- Ungrounded (non-isolated) PV Systems: NEC 690.35(F)
- DC Photovoltaic Power Source: 690.53
- Identification of PV System Interconnection: NEC 690.54
- Batteries and Energy Storage Systems: NEC 690.5(C) 690.55, 690.71(H)5, 705.80
- Identification of Power Sources: NEC 690.56(B)
- Facilities with Rapid Shutdown: NEC 690.56(C)
- Point of Connection Identification: NEC 705.12(D) (2) (3) (b) & (c)
- Identification and warning of additional power source at the panel board: 690.12(D) (3)
- Identification of backfed breaker(s) NEC 408.4

Overview of Label Locations and Requirements

System Component	Required Labels	Notes
AC Combiner	PV Disconnect (NEC 690.13)	
	AC Characteristics (NEC 690.54)	
	Multiple Sources Present (NEC 705.12(D)(2)(3)(c)	
	Inverter Output Location (NEC 705.12(D)(2)(3)(b))	
	Circuits Identified (NEC 408.4)	
AC Disconnect	PV Disconnect (NEC 690.13)	
	AC Characteristics (NEC 690.54)	
Array	Connector Disconnect Warning (NEC 690.33(E))	
Battery Backup	Battery Characteristics (NEC 690.55 and 705.80) Battery disconnects (NEC 690.71(H)) Ground Fault warning (NEC 690.5(C))	Also note NYSFC 608.7.1 and 608.7.2 for additional fire code related requirements
DC Combiner	PV Disconnect (NEC 690.13)	
	Fuse Servicing Disconnect Directory (NEC 690.16(B))	Labels required for disconnects more than 6ft from fuses and/or not load-break rated
	DC characteristics (NEC 690.53)	
	Energized/ungrounded conductors (NEC 690.35(F))	
DC Disconnect	PV Disconnect (NEC 690.13)	
	Fuse Servicing Disconnect Directory (NEC 690.16(B))	Labels required for disconnects more than 6ft from fuses and/or not load-break rated
	Shock hazard (NEC 690.17(E) and 110.21(B))	
	DC characteristics (NEC 690.53)	
	Energized/ungrounded conductors (NEC 690.35(F))	
Junction & Combiner Boxes in Transformerless Systems	Energized/ungrounded conductors (NEC 690.35(F))	Not necessary on pull boxes where there are no splices
String Inverter	PV Disconnect (NEC 690.13)	For integrated disconnect only-be sure to indicate DC, AC, or dual rating
	GFDI (NEC 690.5(C))	
	DC characteristics (NEC 690.53)	
Transformerless (non-isolated) Inverter	PV Disconnect (NEC 690.13)	For integrated disconnect only-be sure to indicate DC, AC, or dual rating
	Energized/ungrounded conductors (NEC 690.35(F))	
	DC characteristics (NEC 690.53)	

Overview of Label Locations and Requirements (cont.)

System Component	Required Labels	Notes
Load Side Connection	Circuits Identified (NEC 408.4)	
	AC Characteristics (NEC 690.54)	
	Multiple Sources Present (NEC 705.12(D)(2)(3)(c)	
	Inverter Output Location (NEC 705.12(D)(2)(3)(b))	
	Power source directory (NEC 705.10)	
	Inverter directory (NEC 690.15(A) and 705.10)	
Subpanel	PV Disconnect (NEC 690.13)	Label applies to backfed breaker in subpanel
	AC Characteristics (NEC 690.54)	
	Multiple Sources Present (NEC 705.12(D)(2)(3)(c)	
	Inverter Output Location (NEC 705.12(D)(2)(3)(b))	
	Circuits Identified (NEC 408.4)	
Supply Side Connection	Power source directory (NEC 705.10)	Place at both main service disconnect and new PV system disconnect
	AC Characteristics (NEC 690.54)	
	PV Disconnect (NEC 690.13)	

I. Label Construction, Placement, Color, and Marking

Materials and Construction

Labeling used outdoors must be of durable construction and intended to withstand conditions including high temperatures, UV exposure, and moisture as required by NEC 110.21(B)(3). Heavy duty UV resistant vinyl, metal, or plastic may all be suitable materials, depending on the specific product ratings. Installers should also consider the label attachment method (e.g., adhesive) when considering longevity and are encouraged to review ANSI Z535.4-2011 for guidance on selecting the appropriate labeling and adhesive materials.

Placement

It is a violation of an enclosure's UL listing (and NEC 110.3(B)) to cover any existing manufacturer applied labels with installation specific labels, so this should be avoided. Additionally, it is highly recommended that the installer attach a label or magnet with the company name and contact information at the inverter or interconnection point for easy reference.

Colors

Label colors are chosen per OSHA 29 CFR 1910.145 direction that the requirements of ANSI Z535.4-2011 be used. NFPA 70 (The National Electrical Code) is driven by NFPA 1 (Fire Code) which provides specific colors and characteristics for certain labels as required by the NEC, so these requirements over rule the referenced ANSI standards in these cases, as noted in this Technical Bulletin and the text of the NEC.

Marking

Marking on labels for system specific values, such as short circuit current, shall not be hand-written and must be legible, as required by NEC 110.21(B)(2). Marking may be achieved by means of engraving or use of a long-lasting ink or paint as part of the printing process.

II. Label Descriptions and NEC References

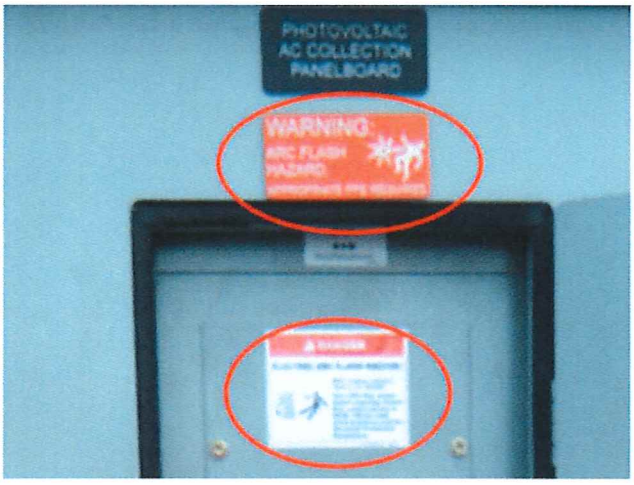
There are various articles in the NEC that require labeling for PV systems. Many of the specific requirements are found in Article 690, Solar Photovoltaic Systems. Additional requirements are found in Article 110: Requirements for Electrical Installation; Article 200: Use and Identification of Grounded Conductors; Article 225: Outside Branch Circuits and Feeders; Article 230: Services; and Article 705: Interconnected Electric Power Production Sources.

Arc-Flash Hazard Warning

NEC 110.16 Flash Protection

Electrical equipment such as switchboards, panel boards, industrial control panels, meter socket enclosures, and motor control centers that are in other than dwelling occupancies and is likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked or factory marked to warn qualified persons of potential electric arc flash hazards. The marking shall meet the requirements in 110.21(B) and be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

Figure 1



Note: does not apply to residential PV systems

Directory / Identification of Power Sources

A directory identifying the solar system and other power sources on site should be placed at service equipment and state the location of system disconnecting means. The NEC stipulates this requirement in the following articles:

NEC 705.10 Directory

A permanent plaque or directory, denoting all electric power sources on or in the premises, shall be installed at each service equipment location and at locations of all electric power production sources capable of being interconnected.

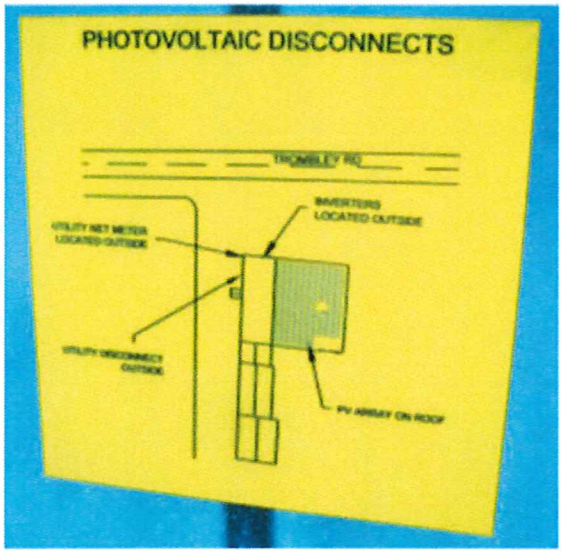
Exception: installations with large numbers of power production sources shall be permitted to be designated by groups.

Figure2

NEC 230.2(E) Identification

Where a building or structure is supplied by more than one service, or any combination of branch circuits, feeders, and services, a permanent plaque or directory shall be installed at each service disconnect location denoting all other services, feeders, and branch circuits supplying that building or structure and the area served by each. Note that NEC 225.37 has similar requirements.

Figure3



NEC 705.70 Utility-Interactive Inverters Mounted in Not-Readily-Accessible Locations

Utility-interactive inverters shall be permitted to be mounted on roofs or other exterior areas that are not readily accessible. In these cases, inverter location must be noted in the directory required by NEC 705.10, described above.

Conductor Identification & Grouping

NEC 310.110 Conductor Identification

This Article specifies the acceptable conductor marking methods for:

- Grounded conductors: NEC 200.6 (see below)
- Equipment grounding conductors: NEC 250.119 (see below)
- Ungrounded conductors: Shall be distinguishable from grounded and grounding conductors, with reference to NEC 310.120 for manufacturer-applied markings

NEC 690.31(B) Identification and Grouping

PV system conductors shall be identified and grouped as required by 690.4(B)(1) through (4). The means of identification shall be permitted by separate color coding, marking tape, tagging, or other approved means.

1. **PV Source Circuits.** PV source circuits shall be identified at all points of termination, connection, and splices.
2. **PV Output and Inverter Circuits.** The conductors of PV output circuits and inverter input and output circuits shall be identified at all points of termination, connection, and splices.
3. **Conductors of Multiple Systems.** Where the conductors of more than one PV system occupy the same junction box, raceway, or equipment, the conductors of each system shall be identified at all termination, connection, and splice points. Exception: Where the identification of the conductors is evident by spacing or arrangement, further identification is not required.
4. **Grouping.** Where the conductors of more than one PV system occupy the same junction box or raceway with a removable cover(s), the AC and DC conductors of each system shall be grouped separately by wire ties or similar means at least once, and then shall be grouped at intervals not to exceed 1.8 m (6 feet).
    - Exception: The requirement for grouping shall not apply if the circuit enters from a cable or raceway unique to the circuit that makes the grouping obvious.

NEC 690.31 (G) (1) Embedded in Building Surfaces

Where circuits are embedded in built-up, laminate, or membrane roofing materials in roof areas not covered by PV modules and associated equipment, the location of circuits shall be clearly marked using a marking protocol that is approved as being suitable for continuous exposure to sunlight and weather.

NEC 200.6 Means of Identifying Grounded Conductors

(A) **Sizes 6 AWG or Smaller.** An insulated grounded conductor 6 AWG or smaller shall be identified by one of the following means:

1. A continuous white outer finish.
2. A continuous gray outer finish.
3. Three continuous white stripes along the conductor's entire length on other than green insulation.
4. Wires that have their outer covering finished to show a white or gray color but have colored tracer threads in the braid identifying the source of manufacture shall be considered as meeting the provisions of this section.

(B) **Sizes 4 or Larger.** An insulated grounded conductor 4 AWG or larger shall be identified by one of the following means:

1. A continuous white outer finish.
2. A continuous gray outer finish.
3. Three continuous white stripes along the conductor's entire length on other than green insulation.
4. At the time of installation, by a distinctive white or gray marking at its terminations. This marking shall encircle the conductor or insulation.

Note: Tape or similar marking means are only code-compliant on large (AWG 4 or larger) conductors. Smaller diameter conductors cannot be ☐ld –identi☐d in this way.

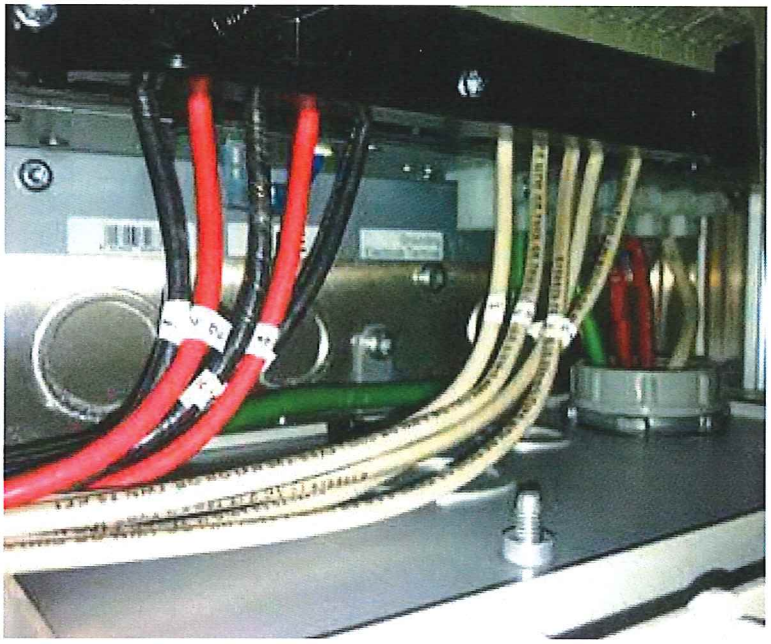
NEC 200.7 Use of Insulation of a White or Gray Color or with Three Continuous White or Gray Stripes

The following shall be used only for the grounded circuit conductor, unless otherwise permitted:

1. A conductor with continuous white or gray covering
2. A conductor with three continuous white or gray stripes on other than green insulation
3. A marking of white or gray color at the termination

Note: PV systems utilizing transformerless (non-isolated) inverters do not ground either polarity of the PV array conductors. Therefore, conductors in these circuits cannot have insulation colored white or gray.

Figure4



NEC 250.119 Identification of Equipment Grounding Conductors

Unless otherwise required, equipment grounding conductors shall be permitted to be bare, covered, or insulated. Individually covered or insulated equipment grounding conductors shall have a continuous outer finish that is either green or green with one or more yellow stripes. Conductors with these color schemes shall not be used for grounded or ungrounded circuit conductors.

Ground Fault Indication

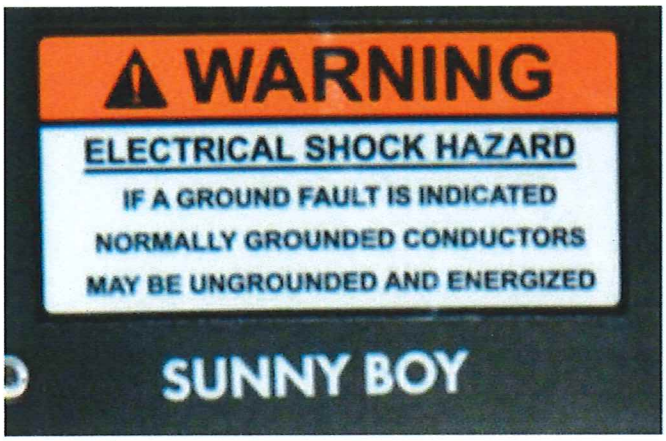
NEC 690.5(C) Labels and Markings

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

When the photovoltaic system also has batteries, the same warning is to be applied by the installer in a visible location at the battery bank.

Figure5



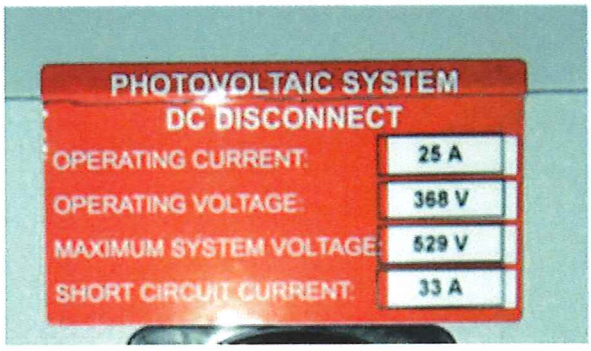
Identification of PV Disconnects

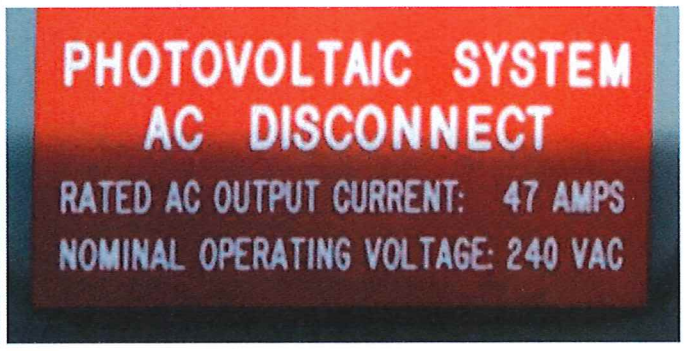
NEC 690.13(B) Marking

Each PV system disconnecting means shall be permanently marked to identify it as a PV system disconnect.

Note: This requirement applies to both AC and DC disconnects. The International Fire Code (IFC) recommends labels that identify the main service disconnect or critical disconnects with reflective, red and white labels (IFC 605.11).

Figure6





NEC 690.16(B) Fuse Servicing

Where the disconnecting means are located more than 1.8 m (6 ft.) from the overcurrent device, a directory showing the location of each disconnect shall be installed at the overcurrent device location. Non-load-break-rated disconnecting means shall be marked "Do not open under load".

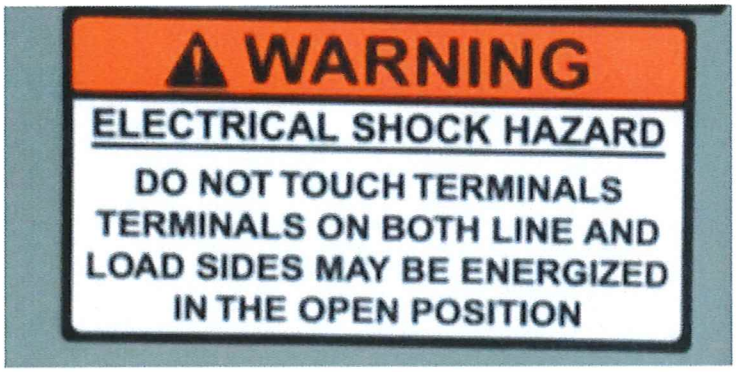
Terminals Energized on Line and Load Sides of Disconnect in Open Position

NEC 690.17 (E) Switch or Circuit Breaker

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. The sign shall be clearly legible and have the following words or equivalent:

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

Figure 7



Note: This requirement does not apply to AC disconnects for any inverter Listed to UL 1741

DC PV Source and Output Circuits Inside a Building

NEC 690.31(G) (3) Marking and Labeling Required

The following wiring methods and enclosures that contain PV power source conductors shall be marked with the wording "WARNING: PHOTOVOLTAIC SOURCE" by means of permanently affixed labels or other approved permanent marking:

1. Exposed raceways, cable trays, and other wiring methods
2. Covers or enclosures of pull boxes and junction boxes
3. Conduit bodies in which any of the available conduit opening are unused

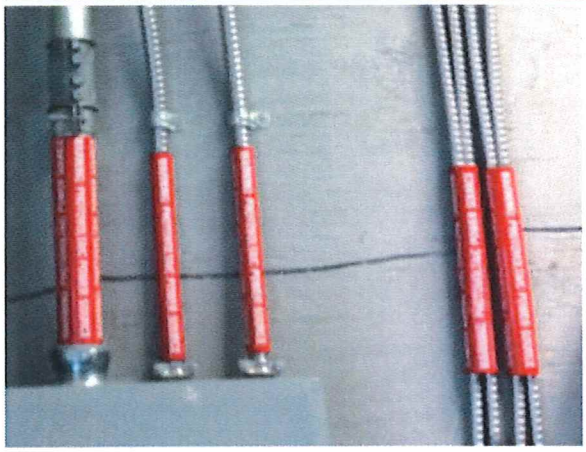
Figure 8

NEC 690.31 (G) (4) Marking and Labeling Methods and Locations

The labels or markings shall be visible after installation. The labels shall be reflective, and all letters shall be capitalized and shall be minimum height of 9.5mm (3/8in) in white on a red background. PV power circuit labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings, or floors. Spacing between labels or makings, or between a label and a marking, shall not be more than 3 m (10 feet). Labels required by this section shall be suitable for the environment where they are installed.

Note: Although the ANSI standard directs that these types of labels have different coloring, the NEC has been driven by fire codes and thus specifies characteristics explicitly for these applications.

Figure 9



Bipolar PV Systems

NEC 690.7(E)(3) Bipolar Source and Output Circuits

WARNING

BIPOLAR PHOTOVOLTAIC ARRAY.
DISCONNECTION OF NEUTRAL OR GROUNDED CONDUCTORS
MAY RESULT IN OVERVOLTAGE ON ARRAY OR INVERTER.

The warning sign(s) or label(s) shall comply with 110.21(B).

Ungrounded (non-isolated, transformerless) PV Systems

NEC 690.35(F) Ungrounded PV Power Systems

The PV 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 UNGROUNDED AND MAY BE ENERGIZED.

Figure 10

Figure 11

DC Photovoltaic Power Source

NEC 690.53 Direct-Current Photovoltaic Power Source

A permanent label for the direct-current photovoltaic power source indicating items (1) through (5) 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

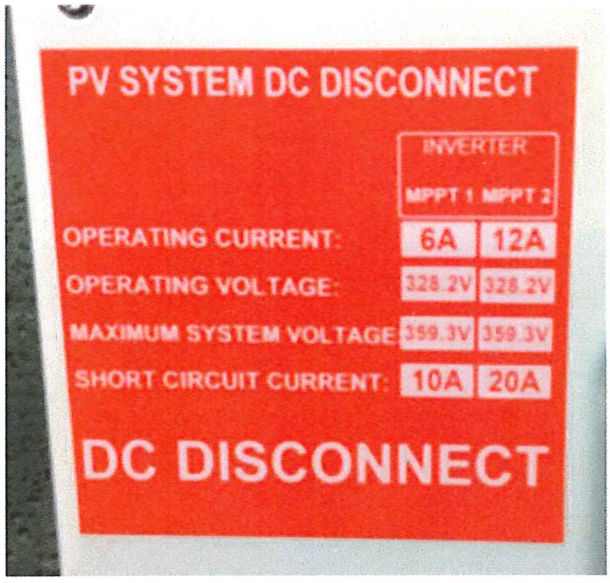
   Refer to § 690.7(A) for maximum PV system voltage.
4. Maximum circuit current. Where the PV power source has multiple outputs, 690.53(1) and (4) shall be specified for each output.

   Refer to § 690.8(A) for calculation of maximum circuit current.
5. Maximum rated output current of the charge controller (if installed).

   Informational Note: Reflecting systems used for irradiance enhancement may result in increased levels of output current and power.

Note: Inverters with multiple MPPT channels must be labeled per channel.

Figure 12



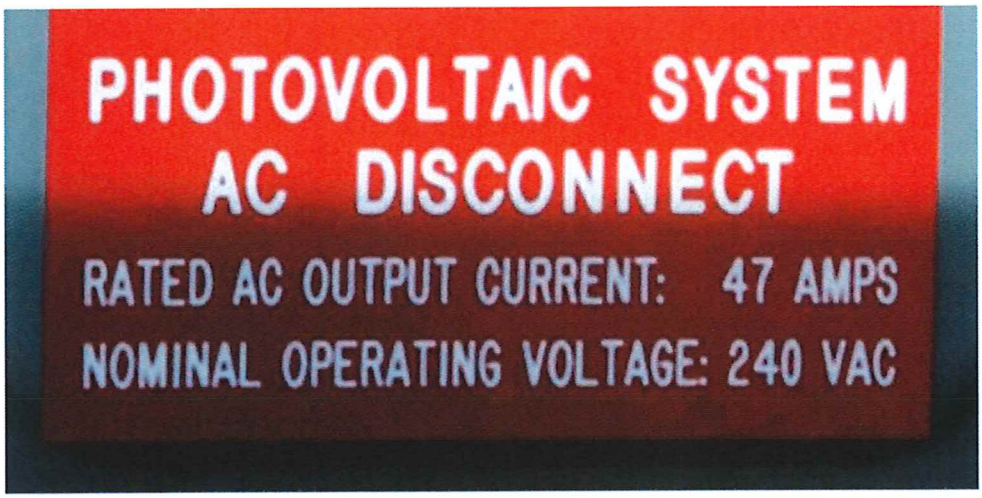
Identification of PV System Interconnection

NEC 690.54 Interactive System Point of Interconnection

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.

Note: Examples of points of interconnection are AC combining panels, AC disconnects, backfed breakers at point of utility interconnection, etc. This requirement does not apply only to the point of common coupling for the PV system and the utility grid.

Figure 13



Batteries and Energy Storage Systems

NEC 690.55 PV Systems Employing Energy Storage

Photovoltaic power systems employing energy storage shall also be marked with the maximum operating voltage, including any equalization voltage and the polarity of the grounded circuit conductor.

Note: also refer to NEC 690.5(C), 480.6(D), 705.80, and 690.71(H)5

NEC 690.71 Storage Batteries

Section H describing disconnects and over current protection where energy storage device input and output terminals are more than 1.5 m (5 feet) from connected equipment, or where the circuits from these terminals pass through a wall or partition, the installation shall comply with the following:

(5) where the energy storage device disconnecting means is not within sight of the PV system AC and DC disconnecting means, records or directories shall be installed at the locations of all disconnecting means indicating the location of all disconnecting means.

Identification of Power Sources

NEC 690.56 Identification of Power Sources

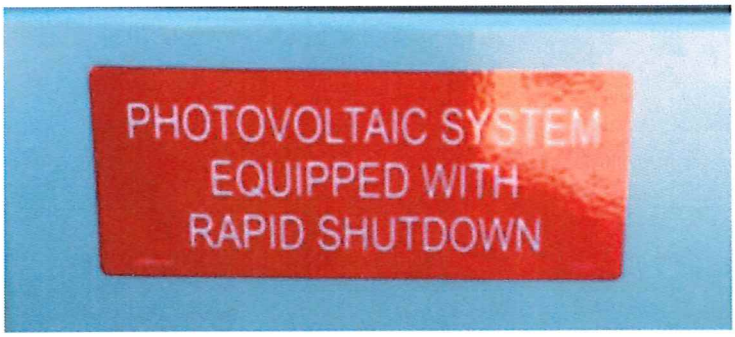
(A) Facilities with Stand-Alone Systems. Any structure or building with a PV power system that is not connected to a utility service source and is a stand-alone system shall have a permanent plaque or directory installed on the exterior of the building or structure at a readily visible location acceptable to the authority having jurisdiction. The plaque or directory shall indicate the location of system disconnecting means and that the structure contains a stand-alone electrical power system. The marking shall be in accordance with 690.31(G).

Note: (A) will not apply to NY-SUN funded systems

(B) Facilities with Utility Services and PV Systems. Buildings or structures with both utility service and a PV system shall have a permanent plaque or directory providing the location of the service disconnecting means and the PV system disconnecting means if not located at the same location. The warning sign(s) or label(s) shall comply with 110.21(B). Refer to figure 2.

(C) Facilities with Rapid Shutdown. Buildings or structures with both utility service and a PV system, complying with 690.12, shall have a permanent plaque or directory including the following wording: PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN.

Figure 14



The plaque or directory shall be reflective, with all letters capitalized and having a minimum height of 9.5 mm (3/8 inch), in white on red background.

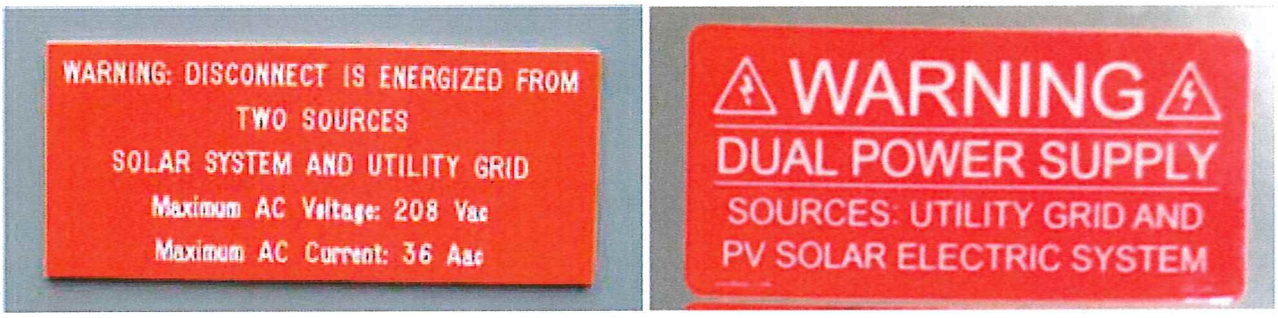
Note: Although the NEC does not explicitly define a location for this labeling, it is suggested that one be located at the main service disconnect for the utility, and one at the inverter location, or the location of the 'rapid shutdown' initiator if different.

Point of Connection Identification

NEC 705.12 (D) (3)

Equipment containing overcurrent devices in circuits supplying power to a buss bar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources.

Figure 15



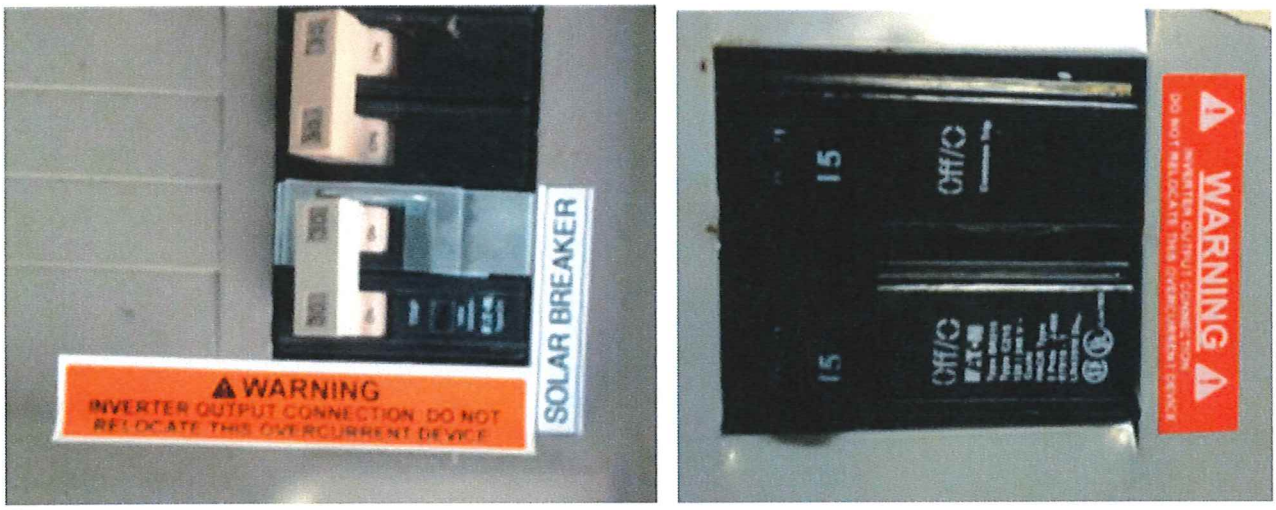
Identification and warning of additional power source at the panel board

705.12 (D) (2) (3) (b)

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

Figure 16



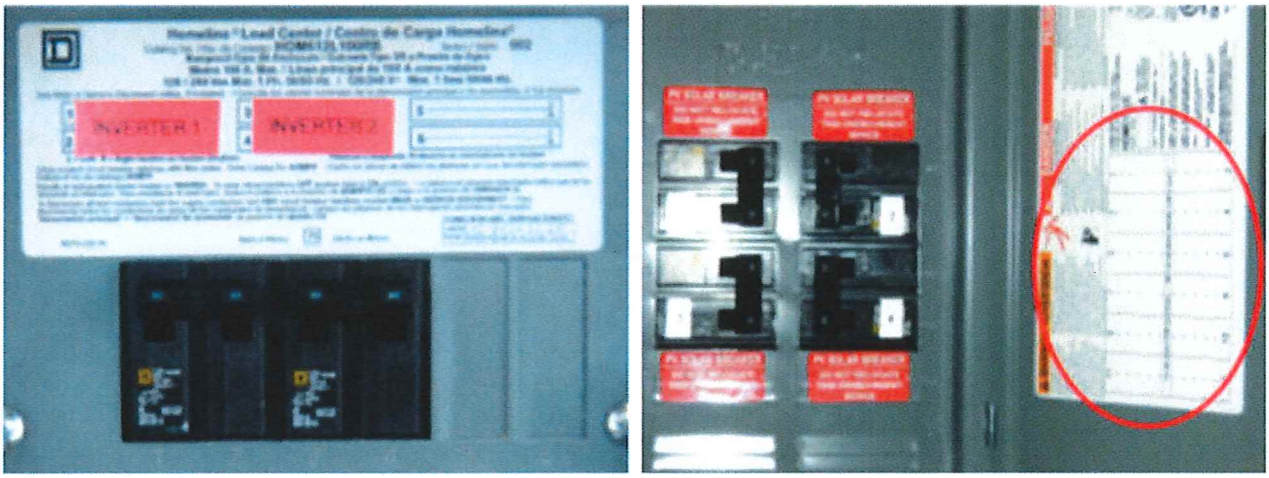
NEC 408 Switchboards, Switchgear, and Panelboards

408.4 Field Identification Required

(A) Circuit Directory or Circuit Identification.

It is important to properly complete the circuit directory, as required by NEC 408.4(A). These directories are generally found on the inside of panelboard cover doors and if there is not one present prior to the PV installation, it is the installer's responsibility to add one and properly document the relevant PV system-associated breakers.

Figure 17



Common Labeling Mistakes to Avoid

Do not cover manufacturer's labeling with other labels.

Figure 18

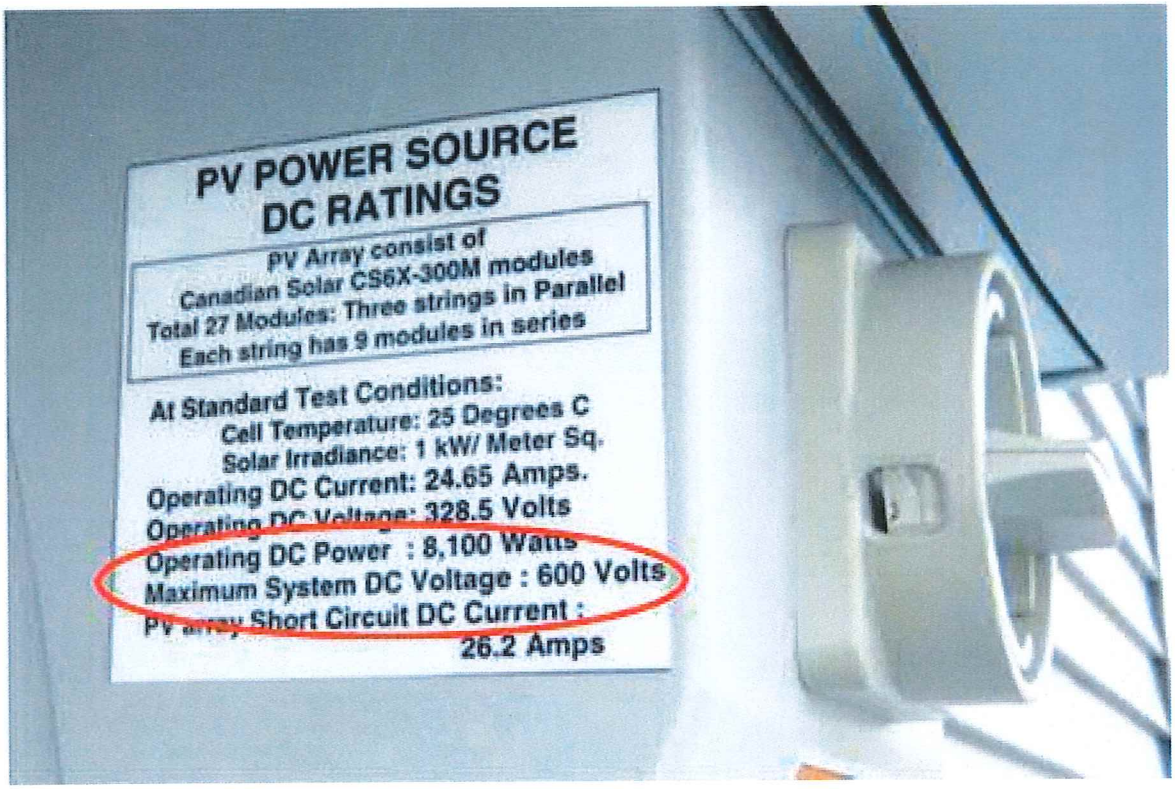
Figure 19

Make sure labels are permanent and suitable for use in the environment to which it will be exposed. In this example, these light duty adhesive labels will not withstand 20+ years of wind, sun and rain, and are in violation of 110.21.

Figure20

Maximum System DC voltage is not 600VDC, it must be calculated per 690.7(A)

Figure21



Label Not of Permanent Construction, nor conforming with 690.31(G)4.

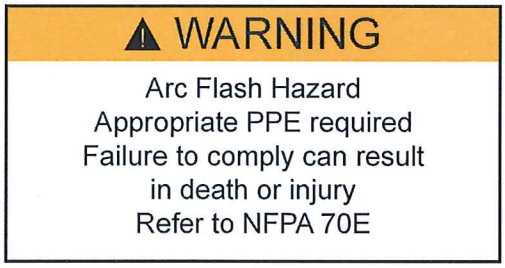
Figure22

Appendix F: Example Labels

The following pages provide example NEC-compliant labels based on NEC required / recommended text as well as their related code articles. While the use of these labels on NY-Sun-funded solar PV projects is encouraged; final selection, preparation, and placement of labels in compliance with the NEC and other relevant codes is the responsibility of the installer.

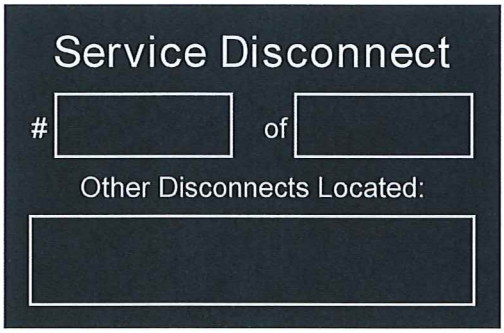
1) All labeling used outdoors must be engraved metal, UV stabilized engraved plastic or of a material sufficiently durable to withstand the environment involved. Values hand written or in written in marker are not acceptable per NEC 2014.
2) Labels used indoors may be made of durable vinyl or paper
3) Do not cover any existing manufacturer applied labels with installation specific labels
4) Label colors chosen per NFPA 70 2014 direction that ANSI Z535-2011 be used
5) Requirements comply with NEC 2014
6) Additionally, it is highly recommended that the installer attach a label with the company name and contact information at the inverter
7) All warning signs or labels shall comply with NEC 110.21(B)

Label #1
110.16



Label #2
225.37, 230.2(E)

1of 2 and 2 of 2 where utility is 1and solar is 2, etc. Description of other disco location.



Label #3
225.37,
230.2(E),
705.12(D)3

This equipment is fed by multiple sources.
Source 1:
Utility Grid – main service panel
in basement
Source 2:
Photovoltaic System – Disconnect on
SE wall of house

Label #4
690.5(C)

⚠ WARNING

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

Label #5
690.7(E)3

⚠ WARNING

BIPOLAR PHOTOVOLTAIC ARRAY.
DISCONNECTION OF NEUTRAL
OR GROUNDED CONDUCTORS MAY
RESULT IN OVERVOLTAGE ON
ARRAY OR INVERTER

Label #6
690.13(B)

PHOTOVOLTAIC SYSTEM DISCONNECT

Label #7
690.15(A)4,
690.56(B),
705.10

PARALLEL GENERATION SOURCE:
PHOTOVOLTAIC SYSTEM

UTILITY SERVICE DISCONNECT LOCATED:

PHOTOVOLTAIC SYSTEM DISCONNECT LOCATED:

Label #8
690.16(B)

Do not open under load

Label #9
690.17(E)

⚠ WARNING

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

Label #10
690.31(G)3 & 4,
690.31(G)1

Plaque or directory shall be reflective, with all letters capitalized and having a minimum height of 9.5mm (3/8 in.), in white on red background

WARNING: PHOTOVOLTAIC
POWER SOURCE

Label #11
690.35(F)

⚠ WARNING

ELECTRIC SHOCK HAZARD
THE DC CONDUCTORS OF THIS
PHOTOVOLTAIC SYSTEM ARE
UNGROUNDED AND ENERGIZED

Label #12
690.53

PHOTOVOLTAIC DISCONNECT

Rated maximum power-point current	A
Rated maximum power-point voltage	V
Maximum system voltage	V
Maximum circuit current	A

Label #13
690.53–multiple MPPT channels

PHOTOVOLTAIC DISCONNECT

Rated maximum power-point current	A
Rated maximum power-point voltage	V
Maximum system voltage	V
Maximum circuit current	A
Maximum rated output current of the charge controller	A

Label #14
690.55

⚠ WARNING

Photovoltaic System Utilizing Energy Storage

Nominal operating voltage	V
Maximum DC voltage	V
Grounded conductor is	NEGATIVE

Label #15
690.54

PHOTOVOLTAIC POWER SOURCE

RATED AC OUTPUT CURRENT	A
NOMINAL OPERATING AC VOLTAGE	V

Label #16
690.56(C)

Plaque or directory shall be reflective, with all letters capitalized and having a minimum height of 9.5mm (3/8 in.), in white on red background

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

Label #17
690.71(H)5

This building contains a battery backup storage system located:

Disconnects are located:

Label #18
705.12(D)2(3)b

⚠ WARNING

INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

Label #19
705.12(D)2(3)c

⚠ WARNING

THIS EQUIPMENT FED BY MULTIPLE SOURCES.
TOTAL RATING OF ALL OVERCURRENT DEVICES,
EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE,
SHALL NOT EXCEED AMPACITY OF BUSS BAR