




City of Phoenix

FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Explanatory Policy – Solar Photovoltaic and Battery Energy Storage Marking

SUBJECT: Solar Photovoltaic and Battery Energy Storage Marking	EFFECTIVE DATE: April 8, 2020
REFERENCES: The Phoenix Fire Code (2018 Edition) Section	REVIEW DATE: July 2022
APPROVED:	
 John Mertens, Fire Marshal	

Purpose:

The purpose of this policy is to provide the signage requirements for Energy Systems including Solar Photovoltaic (PV) and Battery Energy Storage Systems (BESS) regulated by Chapter 12 of the 2018 Phoenix Fire Code (2018 PFC). This policy will provide guidance and specifications for the necessary signage, materials, verbiage and size requirements. The inspection and compliance of these energy systems is critical for the safety of firefighters and the residents of Phoenix. The signage requirements for Solar Photovoltaic and Battery Energy Storage Systems will assist in reducing the risks associated with these alternative energy systems.

Policy:

This policy establishes consistent expectations for the signage, materials, verbiage and size used for Solar Photovoltaic and Battery Energy Storage Systems installed in the City of Phoenix. This signage shall meet the specifications established in the attached detail. This signage requirement must be installed prior to the inspection and being approved (“green-tagged”) or commissioning of the energy system. The inspection must be completed by a Phoenix Fire Department Fire Inspector. Rapid shut down signage shall comply with 2018 PFC Section 1204.5.

Code References:

1204.1.2 Marking. Marking is required on interior and exterior direct-current (DC) conduit, enclosures, race- ways, cable assemblies, junction boxes, combiner boxes and disconnects.



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1204.1.2.1 Materials. The materials used for marking shall be reflective, weather resistant and suitable for the environment. Marking as required in Sections 1204.1.2 through 1204.1.6 shall have all letters capitalized with a minimum height of 3/8 inch (9.5 mm) white on red background.

1204.1.2.2 Marking Content. The marking shall contain the words “WARNING: PHOTOVOLTAIC POWER SOURCE.”

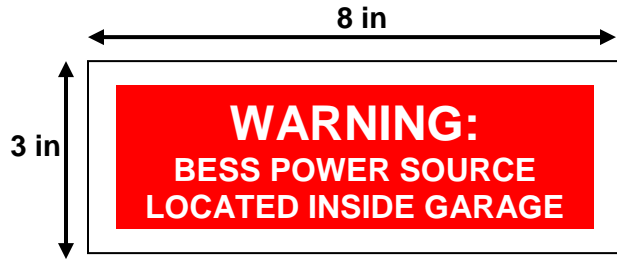
1204.1.2.3 Main Service Disconnect. The marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the disconnect is operated.

1204.1.3 Location of Marking. Marking shall be placed on interior and exterior DC conduit, raceways, enclosures and cable assemblies every 10 feet (3048 mm), within 1 foot (305 mm) of turns or bends and within 1 foot (305 mm) above and below penetrations of roof/ceiling assemblies, walls or barriers.

1204.5 Buildings with rapid shutdown. Buildings with rapid shutdown solar photovoltaic systems shall have permanent labels in accordance with Section 1204.5.1 through 1204.5.3

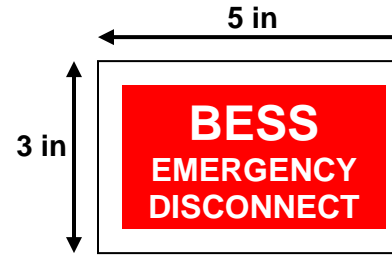
1206.2 Stationary storage battery systems. Stationary storage battery systems having capacities exceeding the values shown in Table 1206.2 shall comply with Section 1206.2.1 through 1206.2.13.6, as applicable. *Approved signage is required for all installations.

SOLAR-PHOTOVOLTAIC (PV) & BATTERY ENERGY STORAGE SYSTEM (BESS) SIGN DETAIL

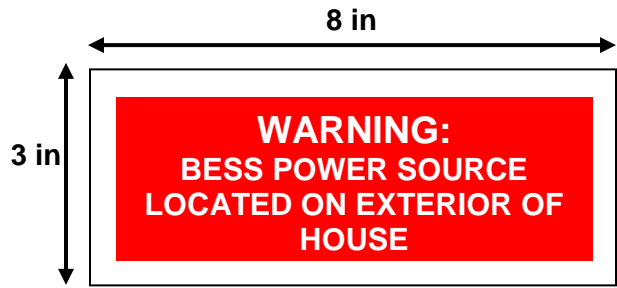


0.735" (11/16") lettering
13/16" stroke

0.480" (1/2") lettering
13/16" stroke

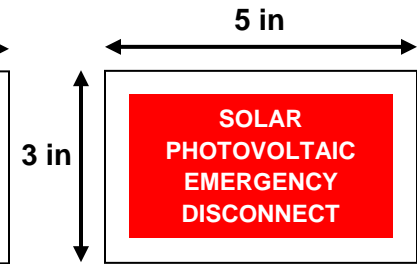
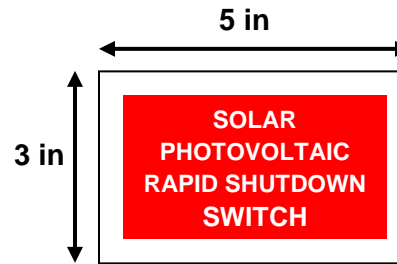


0.48" (1/2") lettering
13/16" stroke

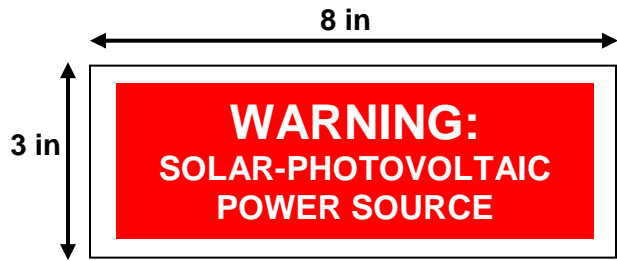


0.558" (9/16) lettering
1" stroke

0.364" (3/8") lettering
1" stroke



0.375" (3/8")
lettering
1" stroke



0.701" (11/16") lettering
1" stroke

0.458" (1/2") lettering
1" stroke



0.735" (11/16") lettering
13/16" Stroke

0.480" (11/16") lettering
13/16" stroke

NOTES:

1. FONT STYLE USED IS **ARIEL CE BOLD** CAPITAL FONTS.
2. THE SIGN FACE SHALL HAVE A WHITE 3M DIAMOND GRADE REFLECTIVE SHEETING (DG³ 4090 SERIES OR EQUIVALENT) APPLIED AS BACKGROUND AND ADHESIVE.
3. LETTERING SHALL BE DONE THE FOLLOWING WAY:
 - 3M SCOTCHLITE ACRYLIC, TRANSPARENT, ELECTRONIC CUTTABLE FILM (RED 1172 SERIES) INVERSE CUT TO ALLOW WHITE REFLECTIVE BACKGROUND TO SHOW THROUGH.
4. ALL SIGN IMAGING SHALL BE IN COMPLIANCE WITH THE REFLECTIVE SHEETING MANUFACTURES MATCH COMPONENT SYSTEM.
5. REQUIRES PRE-APPROVAL BY A FIRE CODE OFFICIAL 602-262-6771.

