

SOLAR INSTALLATION REQUIREMENTS

1. AC Safety Disconnect

- A. The Nema 3R disconnect switch should be adjacent to the electric meter and accessible to the servicing utility company.
- B. The switch must be fusible, minimum size 100 Amp, single phase or three phase and rated for service voltage.
- C. The switch must be securely fastened to the building structure, have a visible open gap between the switch contacts, knife-blade type.
- D. Fuses rated for proper size of solar design being installed. UL rated fuse reducers to be installed if needed.
- E. Circuit breakers are not allowed.
- F. The switch must be able to be locked in the open position.
- G. The location of the disconnect switch may be altered if approved in advance by the servicing utility company and electrical inspector. If location is altered, a permanent phenolic sign must be posted at meter location visually showing the location of the disconnect switch.
- H. Fusible safety switch must include a label stating voltage and amperage of solar system and all additional labels required.

2. Signage and labels

- A. Plaques must be either attached to the AC Generation Safety Disconnect or located next to the disconnect. Plaques are not allowed to be mechanically attached to safety switch with screws, pop rivets or like means due to UL rating being compromised.
- B. Plaque must be a minimum 5" x 7" in size.
- C. Wording for the plaque at the safety disconnect switch must say "CAUTION: Multiple Sources of Power – Lockable AC Generation Source Disconnect."
- D. If the disconnect is within 10' and within sight of the meter, that signage must say "CAUTION: Multiple Sources of Power – Lockable AC Generation Source Disconnect available for Isolation from Utility.
- E. Plaque must be two-ply or three-ply, non-conductive plastic engraved plate that are weatherproof and UV resistant.

- F. Where feeder tap is installed within an existing panel, a sticker must be installed detailing multiple sources of power.
- G. All solar raceways/conduit and approved conductors installed with DC & AC conductors must be labeled every 10' minimum as "Warning: Photovoltaic Power Source".

3. General Guidelines

- A. Feeder tap allowed within electrical service meter with approved tap connector by servicing utility company.
- B. Wiretap insulating piercing connectors must be approved for type of installation and wire size installed.
- C. Minimum feeder wiretap conductor allowed is #3 THHN Copper Conductor.
- D. All tap conductors must be installed in an approved conduit system. Flexible conduit and/or Sealtite conduit is not allowed for tap conductors.
- E. Only copper wire is allowed for entire solar installations unless approved in writing and in advance of construction commencing by the electrical inspector.
- F. Flexible metal conduit cannot exceed six feet in length. Connectors must have approved bushings for their use.
- G. Sealtite conduit cannot exceed six feet in length. Connectors must have approved bushings for their use.
- H. All work must be completed in neat and workmanlike manner.
- I. Solar installations must be in compliance with the 2017 National Electric Code.
- J. Conductors installed in attics from roof-mounted solar panels must be installed in conduit or approved conductors. Open THHN conductors are not allowed.
- K. Trenches must be 24" deep and inspected prior to backfill if exceeding 100 feet in length.
- L. Solar battery backup panels are not allowed to be installed exposed to exterior elements.
- M. If solar battery backup panels are installed in an existing residential garage, then a heat detector must be installed on the ceiling within four (4) feet of the battery location and interconnected to the homes'

existing fire alarm system. If there is no existing fire alarm system, then they must install one interconnected detector inside the home away from the garage location.

- N. If the battery cabinet is located within the basement area or garage it must be installed in the non-habitable area with Type X drywall installed behind battery cabinets and stud wall area up to ceiling area. Type X drywall must be installed above the entire battery mounting area on the existing floor joists and/or finished ceiling at least 4 feet from wall. All joints must be fire caulked and seams covered. Also, install one interconnected heat detector above the battery area connected to the existing fire alarm system.