CITY OF PHILADELPHIA
DEPARTMENT OF LICENSES & INSPECTIONS
Construction Services Division
Municipal Services Building - Concourse Level
1401 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19102

SOLAR PV SYSTEM STANDARD

For installations made on One or Two Family Dwellings. This document shall be submitted with the Electrical Permit application.

SOLAR PV SYSTEM INSTALLATIONS

If the proposed Solar PV System fully meets the standards below, the project requires an Electrical Permit only. All other projects will require the submission of construction plans and a Building Permit.

The Licensed Electrical Contractor must meet the following installation conditions, limitations, and requirements regarding the installation of the Solar PV System for the Department to allow the full installation to proceed under the electrical permit. Note: The Electrical Contractor must accept responsibility for the structural installation of the roof-top equipment.

CONDITIONS

1. Installation must fully comply with the requirements of the 2009 IRC, 2009 IBC, and the NEC 2008.
2. Systems are limited to a maximum of 10 kW or less in size.
3. Installation must be on the roof of a one- or two- family dwelling.
4. An Interconnection Application/Agreement – Part 1 (Level 1) has been submitted to PECO for their approval.
5. The following are not eligible for use of this standard:
   - Installation on roof systems comprised of engineered trusses.
   - Installation on a sloped roof with more than one layer of shingles in place.
   - Property is designated historical by the Philadelphia Historical Commission.

INSTALLATION LIMITATIONS AND REQUIREMENTS

1. Installation shall not commence until Contractor has obtained Level 1 approval from PECO.
2. Installation shall be in accordance with manufacturer's instructions.
3. The Contractor, **by signing this form below**, confirms that the existing roof structure will effectively accept the PV Module (Panel) mounting hardware, safely support the combined weight of the PV Modules and future snow loads, and safely withstand wind uplift loads.
4. Equipment shall impose no more than a 45 pounds per square foot (psf) point load in any location.
5. Equipment shall weigh less than 5 psf.
6. The height of the system shall be less than 18 inches above the adjacent roof.
7. Installation shall include a pre-engineered ballasted or mounting structure with attachments both designed for a wind load of 90 miles per hour (mph).
8. Roof mounts with integrated flashing shall be used for mounting the PV Modules to the roof structural members of non-metal sloped roofs. Penetrating roof mounts (with EPDM rubber gasket seals, or equivalent), and/or non-penetrating clamps shall be used on all sloped metal roofs.
9. Ballasted systems can be utilized for mounting PV Modules to flat roofs.
10. A three (3) foot clearance (minimum of one side) must be provided on roof for equipment maintenance.

ELECTRICAL REQUIREMENTS

1. PV System Components, such as Modules, Strings, Arrays, Combiners, and Inverters must be listed for Solar PV application per NEC 690.4(D).
2. All PV System components shall be properly grounded and bonded.
3. A PECO required AC disconnect switch shall be located on the exterior of the building.
4. All PV System disconnect switches, panel boards, and related equipment shall be labeled in accordance with NEC 690 and NEC 705 requirements.

PROJECT SUBMISSION REQUIREMENTS

1. The Contractor shall provide a signed copy of the Interconnection Application/Agreement – Part 1 (Level 1) that has been submitted to PECO.
2. The Contractor shall provide three (3) sets of the following information:
   a. "Single Line Diagrams" (minimum 11" x 17" paper) showing the layout of the PV Modules, AC & DC Disconnect Switches, Inverters or Micro-inverters, Meters, Conductors (type, size and color), and Grounding Detail. Panel board and disconnect switch labeling details shall be included on plans.
   b. Equipment manufacturer specification sheets for all equipment, which shall include manufacturer's Model No., and Installation Instructions.

AP#_____ Licensed Electrician's Name_____

Licensed Electrician's Signature_____