



## Residential Rooftop Solar PV Systems ≤ 10 kW Express Eligibility Checklist

This Express Eligibility Checklist (“Checklist”) applies to flush-mounted solar photovoltaic (PV) systems ≤ 10 kW installed on the roofs of wood-framed one- and two-family dwellings. “Flush-mounted” means the modules are installed parallel to, and relatively close to, the roof surface. This Checklist is intended to be a simple check to demonstrate reasonable assurance that the design of the solar array complies with the electrical, fire and structural provisions of the 2019 California Electrical Code (CEC), California Fire Code (CFC), California Building Code (CBC) and California Residential Code (CRC). If a project meets the design criteria on this Checklist, then the need for a detailed engineering analysis and formal plan review submittal may be avoided and a streamlined permit issuance process may be granted.

<b>GENERAL REQUIREMENTS</b>	<b>(please check box)</b>
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|--|-------|
| 1. System size, both new and existing combined, is 10 kW AC CEC rating or less                         | □Y □N |
| 2. System is roof-mounted on one- or two-family dwelling or accessory structure                        | □Y □N |
| 3. System will not exceed the maximum legal building height  | □Y □N |
| 4. Permit application is completed and attached  | □Y □N |
| 5. Construction documents (i.e., plans, specifications, etc) for the system are completed and attached | □Y □N |
| 6. System is mounted on an existing and legally permitted building or structure                        | □Y □N |

<b>ELECTRICAL REQUIREMENTS</b>	<b>(please check box)</b>
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|--|-------|
| 7. PV breakers is connected on the opposite end of the service panel   | □Y □N |
| 8. Installation does not have a line side tap (GMA is acceptable)  | □Y □N |
| 9. Sum of 125% of the inverter(s) output circuit current and the rating of the overcurrent device protecting the busbar does not exceed 120% of the ampacity of the busbar; calculation shall be provided onto the single-line diagram sheet of the plans for verification by city inspector | □Y □N |
| 10. AC circuit conductor ampacity is not less than #10 AWG for 20A/30A or #8 AWG for 40A overcurrent protection  | □Y □N |
| 11. All wiring system and equipment are located outside of the premise or in the garage  | □Y □N |
| 12. Metallic cold-water grounding for the system will be provided within 5-feet of the water service entry to the primary residence; OR will provide UFER or two ground rods 6 feet apart  | □Y □N |

<b>FIRE SAFETY REQUIREMENTS</b>	<b>(please check box)</b>
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|---|-------|
| 13. Diagram of the roof layout that reflects all panels, modules, clear access pathways and approximate locations of electrical disconnecting means and roof access points are completed and attached | □Y □N |
| 14. System is a fire classification “C” rating  | □Y □N |
| 15. All required markings and placards will be permanently etched on plastic or phenolic resin placards; sticker marking shall be on DC conduits/junction boxes                                       | □Y □N |

<b>STRUCTURAL REQUIREMENTS FOR FLUSH MOUNTED SOLAR ARRAYS</b>	<b>(please check box)</b>
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**ROOF CHECKS**

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| 16. Visual Review/Contractor's Site Audit of Existing Conditions:  |       |
| a. Roof is a single roof without a reroof overlay  | □Y □N |
| b. Roof structure appear structurally sound, without signs of alterations or significant structural deterioration or sagging (see Figure 1*) | □Y □N |

17. Roof Structure Data:
- a. Measured roof slope (e.g., 6:12): \_\_\_\_\_:12
  - b. Type of roof framing (rafter or manufactured truss): rafter truss
  - c. Measured rafter or truss spacing (center-to-center): \_\_\_\_\_inch
  - d. Measured rafter size in inches (e.g., 1-3/4" x 3-3/4"): \_\_\_inch x \_\_\_inch
  - e. Measured rafter horizontal span in feet and/or inches (see Figure 4\*): \_\_\_feet - \_\_\_inch
  - f. Horizontal rafter span in feet and/or inches per Table 2\*: \_\_\_feet - \_\_\_inch
  - g. Measured horizontal rafter span is less than span in Table 2\*: Y N

**SOLAR ARRAY CHECKS**

18. Flush-mounted Solar Array:
- a. Plane of the modules (panels) is parallel to the plane of the roof Y N
  - b. There is a 2" to 10" gap between underside of module and the roof Y N
  - c. Modules do not overhang any roof edges (ridges, hips, gable ends, eaves) Y N
19. Modules plus support components weigh no more than 4 psf for photovoltaic arrays Y N
20. Array covers no more than half of the total roof area (all roof planes) Y N
21. Solar support component from manufacturer's project-specific worksheets/tables are completed Y N
22. Roof plan of the module and anchor layout are attached (see Figure 2\*) Y N
23. Downward Load Check (Anchor Layout Check):
- a. Proposed anchor horizontal spacing (see Figure 2\*): \_\_\_feet - \_\_\_inch
  - b. Horizontal anchor spacing per Table 1\*: \_\_\_feet - \_\_\_inch
  - c. Proposed anchor horizontal spacing is equal to or less than Table 1\* spacing: Y N
24. Wind Uplift Check (Anchor Fastener Check):
- a. Anchor fastener data (see Figure 3\*):
    - (1). Diameter of lag screw, hanger bolt or self-drilling screw: \_\_\_\_\_inch
    - (2). Embedment depth of rafter: \_\_\_\_\_inch
    - (3). Number of screws per anchor (typically one): \_\_\_\_\_
    - (4). 5/16" diameter lag screws with 2.5" embedment into the rafter are used OR the anchor fastener meet the manufacturer's guidelines Y N

**FOOTNOTE:** \* Refer to the website at [www.longbeach.gov/lbds/building/permit-center/solar-permit/](http://www.longbeach.gov/lbds/building/permit-center/solar-permit/) for the referenced tables and figures on this checklist.

**ACKNOWLEDGMENT STATEMENT**

I/We, the undersigned contractor(s)/installer(s) responsible for the design and installation of the solar PV system, understand that the permit will be issued based upon the checked "Y" and completing the required information to all of the above questions. I/We understand that if any questions are checked "N" or incomplete information to all of the above questions, I/We will revise the design to fit the criteria of this Checklist; otherwise the permit application may be required to go through the standard plan review process. I/We acknowledge that the construction documents, which are neither reviewed nor approved by the City, reflect the criteria of this Checklist. I/We assume all risk/responsibility if the installation of the work deviates from this Checklist and will strictly adhere to all code requirements and make the necessary changes to the installation. I/We understand that this permit conveys no vested rights in the event a conflict with any codes, local ordinances, and state laws are later identified as part of the inspection process. We further understand that any correction, removal or change of any portion of the installation will be done at the sole expense/liability of the contractor(s)/installer(s).

Job Address: \_\_\_\_\_ Permit #: \_\_\_\_\_

Contractor/Installer: \_\_\_\_\_ License # & Class: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Phone #: \_\_\_\_\_

To request this information in an alternative format or to request a reasonable accommodation, please contact the Development Services Department at [longbeach.gov/lbds](http://longbeach.gov/lbds) and 562.570.3807. A minimum of three business days is requested to ensure availability; attempts will be made to accommodate requests with shorter notice.