LOW INCOME WEATHERIZATION PROGRAM

SOLAR THERMAL WARRANTY AND OPERATION AND MAINTENANCE REQUIREMENTS

PARTICIPANT INFORMATION

Property Name	
Property Street Address	
Property City, State, Zip	
Contractor Name	
Contractor Contact Information	

LIWP SOLAR THERMAL WARRANTY REQUIREMENTS

The solar thermal system must meet the following minimum requirements:

- All solar collectors must have a minimum of a 10-year **manufacturer's** performance warranty to protect against defects and to ensure no more than a 15 percent performance degradation over the 10 year period.
- All systems must have a minimum 10-year **installer** performance warranty to protect the purchaser against more than a 15 percent degradation of system performance over the 10-year period that may occur as a result of faulty installation.
- Equipment and installation must conform to <u>CSI Solar Thermal Program requirements</u>, even if the project is not receiving the CSI Solar Thermal incentive.
- All systems must include a customer performance monitoring (CPM) system, **regardless of system size**. For a period of **ten** years from start of operation, System Owner must have the means to determine if the system is operating. This applies to water heating and pool heating systems. At a minimum, the CPM equipment must provide:
 - o The quantity of solar energy delivered to the System Owner
 - Message alerts (email or text) to the building owner and maintenance contractor if the system experiences a fault, is not working, or requires maintenance.
- All systems must have a minimum 1-year warranty on installation, labor, and workmanship not otherwise covered by the manufacturer's performance warranty.

By signing below, the participant certifies that all of the work has been completed to program standards.

Participant Signature

Date

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LIWP SOLAR OPERATION AND MAINTENANCE REQUIREMENTS

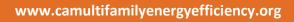
To ensure the proper operation of the solar thermal system, at a minimum an annual inspection shall be performed with the following components, for a minimum 10 year period.

- Visual Inspection
 - Collectors
 - o Tank
 - Wiring and controls
 - Piping, insulation, jacketing, and labeling
 - Control and pump wiring
- Operation of the system
 - Check pressure on the collector loop and modify as needed
 - o Check pressure on the expansion tank(s) and modify as needed
 - Confirm flow on all active loops
 - o Confirm heat transfer temperatures are within acceptable ranges
 - o Confirm controller functions including safety operations
 - o Confirm monitoring connection and data collection capabilities (if installed)
 - o Confirm system sensors are reading correct temperatures
 - Record all inspections completed
 - o Inform Owner of all deficiencies identified
- Maintenance Activities
 - o Open tank, drain, and flush sediment
 - o Exercise all main valves and confirm operation
 - Collect heat transfer fluid sample and test pH and concentration
 - Exercise temperature and pressure relief valves

By signing below, the participant certifies that the operation and maintenance requirements will be performed by a qualified contractor annually for 10 years.

Participant Signature

Date



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