

This shortened CF1R-ALT form may be used when complying with the replacement of a Domestic Water Heater and/or Hydronic Heating System added to the existing residence as indicated on the City of Placerville permit application part 10. A California CF-1R –ALT form will be required if a HERS field verification is required for the project.

Prepared BY:

Date Prepared:

Prescriptive Residential Alterations That Do Not Require HERS Filed Verification

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

CF1R-ALT-05-E (2013 MODIFIED)

Project Name:

H. WATER HEATING SYSTEMS (Section 150.2(b)1G) 2013 California Energy Code

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
|--------------------|---|--|---------------------------|-------------------|------------------------------|-----------------------------------|-----------|------------------|-------------------|-------------------------|--------------------------|------------------|-----------------------------|--------------------------------|
| Dwelling Unit Name | Water Heating System Identification or Name | Water Heating System Location or Area Served | Water Heating System Type | Water Heater Type | # of Water Heaters in System | Water Heater Storage Volume (gal) | Fuel Type | Rated Input Type | Rated Input Value | Heating Efficiency Type | Heating Efficiency Value | Standby Loss (%) | Exterior Insulation R-Value | Back-Up Solar Savings Fraction |
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Note per section 150.0(j)2 the water heater hot and cold water pipes must be insulated within the first five feet from the storage tank. Insulation installed next to gas vent pipe must be protected for the heat of the vent.

User instruction for completing the Domestic Water Heater and /or the Hydronic heating system is a dwelling using the prescriptive method. If the unit installed cannot meet the requirements for the prescriptive method then the performance method and forms must be used to show compliance to the California Energy Code.

H. WATER HEATING SYSTEMS

Water heating compliance for an alteration is described in Section 150.2(b)1G. For a single dwelling unit, a gas or propane water heater that meets the requirements of 150.1(c)8 can be used. If no natural gas is connected to the building, an electric water heater with an energy factor greater than or equal to the minimal energy factor required under the Appliance Efficiency Regulation, and with a storage capacity of less than 60 gallons and a maximum of 75,000 BTU's can be used. Dwelling Unit distribution systems are limited to standard trunk and branch or demand recirculation for gas or propane water heaters. Demand recirculation is not allowed for electric water heaters. If there is no natural gas connected to the building, an electric water heater may be replaced with another electric water heater. However, changing from gas to electric is not allowed. Multi-family central systems must use certified equipment as defined under Section 110.1 and 110.3.

NOTE: If the proposed installation does not meet the requirements allowed specifically for alterations, use form CF1R-NCB-01 to document the water heater alteration.

1. Dwelling Unit Name: Name of dwelling unit or any other identifying name.
2. Water Heating System Identification or Name: Name of the Water Heating System or any other identifying name.
3. Water Heating System Location or Area Served: Zone, or area, served by the Water Heating System.
4. Water Heating System Type: Domestic Hot Water (DHW), Hydronic, Combined Hydronic, or Central. DHW is for domestic hot water, hydronic is a water heating system used for space heating only; combined hydronic is when the water heater will provide both space conditioning and domestic hot water.
5. Water Heater Type: For non-central systems only Small Storage or Small Instantaneous are allowed. For central systems pick from Large Storage, Small Storage, Heat Pump, Boiler, Large Instantaneous, Small Instantaneous or Indirect.
6. Number of Water Heaters in System: In single-family and multi-family with water heaters in each dwelling unit the value is 1. For multi-family central systems serving multiple dwelling units enter the total number of water heaters.
7. Water Heater Storage Volume: Tank capacity in gallons. For individual water heaters for a dwelling unit this will be 60 gallons or less. If instantaneous enter n/a. For multi-family central systems enter the total storage volume.
8. Fuel Type: Gas, Propane, Electric (Only if natural gas is not available)
9. Rated Input Type: Enter the equipment input rating type, for gas or propane fired units are Btuh, for electric fired system the units are kW.

10. Rated Input Value: Enter the numeric value of rated input.
11. Heating Efficiency Type: Energy Factor, AFUE, or Thermal Efficiency. From product literature or a California Energy Commission directory.
12. Heating Efficiency Value: Enter the value from product literature or a California Energy Commission directory
13. Standby Loss (%): Applies only to large storage water heaters; enter n/a for small storage or instantaneous water heaters.
14. Exterior Insulation R-Value: Enter the R-value if exterior insulation on the storage tank is installed
15. Back-Up Solar Savings Fraction: If compliance requires a back-up solar system, indicate the solar contribution (e.g., 0.30). External calculations are required.