

RESIDENTIAL ALTERATIONS – WATER HEATER

CERTIFICATE OF COMPLIANCE		CF-1R-ALT-01-E
Prescriptive Residential Alterations		(Page 1 of 2)
Project Name:		Date Prepared:

A. GENERAL INFORMATION		
01	Project Name:	02 Date Prepared:
03	Project Location:	06 Number of Altered Dwelling Units:
05	CA City: SAN RAMON	08 Fuel Type:
07	Zip Code:	10 Total Conditioned Floor Area (ft2):
09	Climate Zone: 12	
11	Building Type	
13	Project Scope:	

G. WATER HEATING SYSTEMS (Section 150.2(b)1G)														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Water Heating System Identification or Name	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 Insul. R-Value	Back-Up Solar Savings Fraction	Central DHW System Distribution Type	Dwelling Unit DHW System Distribution Type

RESIDENTIAL ALTERATIONS – WATER HEATER**CERTIFICATE OF COMPLIANCE**

CF-1R-ALT-01-E

Prescriptive Residential Alterations

(Page 2 of 2)

Project Name:**Date Prepared:****DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company :	Date Signed:
Address:	License:
City/State/Zip:	Phone:

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300.

Minimum requirements for prescriptive alteration compliance can be found in Building Energy Efficiency Standards Section 150.2(b)1.

Completing these forms will require that you have the Reference Appendices for the 2013 Building Energy Efficiency Standards (P400-2012-005). This document contains the Joint Appendices which are used to determine climate zone and to complete the section for opaque surfaces. When the term CF1R is used it means the CF1R-ALT-01. Worksheets are identified by their entire name and subsequently by only the worksheet number, such as WS-02.

Instructions for sections with column numbers and row numbers are given separately.

If any part of the alteration does not comply, prescriptive compliance fails, in which case the performance compliance approach must be used in an attempt to achieve compliance.

A. GENERAL INFORMATION

Project Name: Identifying information, such as owner's name.

Date: Date of document preparation.

Project Location: Legal street address of property or other applicable identifying information.

Compliance Method: Prescriptive.

Zip Code: 5-digit zip code for the project location (used to determine climate zone).

Number of Dwelling Units: 1 for single-family, 1 or more for multifamily.

Climate zone: From Joint Appendix JA2.1.1.

Fuel Type: Natural Gas, Liquefied Propane Gas, or Electricity. NOTE: prescriptive compliance only allows electricity if existing appliances are electric and natural gas is not available in the building.

Building Type: Single Family (includes duplex), or Multi Family (a building that shares common walls and common floors or ceilings).

Total Conditioned Floor Area: Enter the new conditioned floor area in ft², as measured from the outside of exterior walls of the dwelling unit or building being altered.

Project Scope: Check all that apply – water heating alteration.

G. WATER HEATING SYSTEMS

Water heating compliance for an alteration is described in Section 150.2(b). For single dwelling a gas or propane water heater, with a storage tank of 60 gallons maximum or instantaneous (tankless) can be used. Dwelling Unit distribution systems are limited to Standard trunk and branch or demand recirculation for gas or propane water heater. Demand recirculation is not allowed for electric water heater. 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. Water Heating System Identification or Name: enter a unique name for the Water Heating System.
2. 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 are when the water heater will provide both space conditioning and domestic hot water.
3. 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.
4. Number of water heaters in system: In single-family and multi-family with water heaters in each dwelling units the value is 1. For multi-family central systems serving multiple dwelling units enter the total number of water heaters.
5. Water heater volume (gal): 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.

6. Fuel Type: Gas, Propane, Electric (Only if natural gas is not available)
7. 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.
8. Rated Input Value: Enter the numeric value of rated input.
9. Heating Efficiency Type: Energy Factor, AFUE, or Thermal Efficiency. From product literature or a California Energy Commission directory.
10. Heating Efficiency Value: Enter the value from product literature or a California Energy Commission directory
11. Standby Loss (percent): Applies only to large storage water heaters, Enter n/a for small storage or instantaneous water heaters.
12. Exterior Insulation R-Value: Enter the R-value if exterior insulation on the storage tank is installed
13. 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.
14. Central DHW Distribution System: For multi-family buildings with using a central distribution system a demand recirculation system with at least two distribution loops must be installed. This requirement applies to any building with eight or more units. If the system is non-central or project is individual units enter n/a.
15. Dwelling Unit DHW Distribution Type: For a Central DHW this field shall be Standard. If non-central then pick from Standard, Demand Recirculation – Manual Control, Demand Recirculation – Sensor Control. If non-central electric water heater this must be Standard, no recirculation system shall be installed.

SIGNATURES

1. The person who prepared the CF1R will sign and complete the fields for their name, company (if applicable), address, phone number, certification information (if applicable), date and signature (may be electronic).
2. The person who is assuming responsibility for the project being built to comply with Title 24, Part 6, will complete the fields for their name, company (if applicable), address, phone number, license number (if applicable), date and signature (may be electronic).

REGISTRATION

1. The CF1R must be registered with a HERS provider prior to submitting for a building permit. See Residential Manual Section 2.1.1.