

# Prescriptive Residential Alterations That Do Not Require HERS Field Verification

CEC-CF1R-ALT-05-E (Revised 01/19)

COMMISSION



CERTIFICATE OF COMPLIANCE	CF1R-ALT-05-E
Prescriptive Residential Alterations That Do Not Require HERS Field Verification	(Page 1 of 2)
Project Name:	Date Prepared:

*This compliance document is only applicable to simple alterations that do not require HERS verification for compliance. When HERS verification is required, a CF1R-ALT-01 shall first be registered with a HERS Provider Data Registry.*

*If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible. Alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. All applicable Mandatory Measures shall be met. Temporary labels shall not be removed before verification by the building inspector.*

<b>A. General Information</b>					
01	Project Location:		02	Building Type:	
03	CA City:		04	Number of Altered Dwelling Units:	
05	Zip Code:		06	Fuel Type:	
07	Project Scope:				

<b>H. Water Heating Systems (Section 150.2(b)1G)</b>														
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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Project Name:		Page 8 of 8 Date Prepared:
<b>DOCUMENTATION AUTHOR'S DECLARATION STATEMENT</b>		
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:	
<b>RESPONSIBLE PERSON'S DECLARATION STATEMENT</b>		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> <li>The information provided on this Certificate of Compliance is true and correct.</li> <li>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).</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol>		
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.**

## CF1R-ALT-05-E User Instructions

**NOTE: If more space is needed, print a duplicate page and fill in.**

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 2019 Building Energy Efficiency Standards (P400-2018-020). 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-05. Worksheets are identified by their entire name and subsequently by only the worksheet number, such as ENV-02.

Instructions for sections with column numbers and row letters 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

1. Project Name: Identifying information, such as owner's name.
2. Date Prepared: Date of document preparation.
3. Project Location: Legal street address of property or other applicable identifying information.
4. Building Front Orientation: Building front orientation expressed in degrees, where North = 0, East = 90, South = 180, and West = 270. Indicate cardinal if it is a subdivision or multi-family project built in multiple orientations. The standards (section 100.1) include the following additional details for determining orientation:
  - Cardinal covers all orientations (for buildings that will be built in multiple orientations);
  - North is oriented to within 45 degrees of true north, including 45 degrees east of north;
  - East is oriented to within 45 degrees of true east, including 45 degrees south of east;
  - South is oriented to within 45 degrees of true south, including 45 degrees west of south;
  - West is oriented to within 45 degrees of true west, including 45 degrees north of west.
5. CA City: Legal city/town of property.
6. Number of Altered Dwelling Units: 1 for single-family, 1 or more for multifamily.
7. Zip Code: 5-digit zip code for the project location (used to determine climate zone).
8. Fuel Type: Natural Gas, Liquefied Propane Gas, or Electricity.

NOTE: Prescriptive compliance only allows electricity if natural gas is not connected to the building, or if the conditions of Section 150.2(b)1H are met. See instruction at section H for more information.

9. Climate Zone: From Joint Appendix JA2.1.1.
10. Total Conditioned Floor Area: Enter the new conditioned floor area in ft<sup>2</sup>, as measured from the outside of exterior walls of the dwelling unit or building being altered.
11. Building Type: Single Family (includes duplex), or Multi-Family (a building that shares common walls and common floors or ceilings).
12. Slab Area: Area of the first floor slab (if any) in ft<sup>2</sup>.
13. Project Scope: Insulation, Roof Replacement, Fenestration/Glazing, Heating System, Cooling System, Duct System, and/or Water Heating System alteration.

### B. Water Heating Systems

Water heating compliance for an alteration is described in Section 150.2(b)1H. For a single dwelling unit, a gas or propane water heater 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, or an electric resistance storage type water heater with a storage capacity of less than 60 gallons can be used. For recirculation distribution systems, only demand recirculation systems with manual control pumps as specified in RA4.4 shall

be used. 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.

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 80 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 connected, or if the conditions of Section 150.2(b)1Hiii are met)  
NOTE: The following table lists replacement heat pump water heating systems by climate zone that meet the requirements of 150.2(b)Hiii.

Precalculated Replacement Heat Pump Water Heating Systems for Single Dwelling Units

CZ	Energy Factor greater than or equal to
1	2.75
2	2.75
3	2.75
4	2.8
5	2.75
6	2.33
7	2.5
8	2.33
9	2.33
10	2.33
11	2.5
12	2.8
13	2.5
14	2.5
15	2.33
16	EF $\geq$ 3, plus a solar water heating system with solar saving fraction $\geq$ 0.4

9. Rated Input Type: Enter the equipment input rating type. Btuh for gas or propane fired units and kW for electric fired systems.
10. Rated Input Value: Enter the numeric value of rated input.
11. Heating Efficiency Type: Energy Factor, AFUE, Thermal Efficiency, or Uniform Energy Factor. From product literature or California Energy Commission directory.
12. Heating Efficiency Value: Enter the value from product literature or California Energy Commission directory
13. Standby Loss (%): Applies only to large storage water heaters; enter N/A for small storage, instantaneous, or heat pump 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.

**Documentation Declaration Statements**

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.
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.