

CEC-CF3R-MCH-33-H

### SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

#### **CERTIFICATE OF VERIFICATION**

Note:	This	table	completed	d by	HERS	Registry.
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Project Name:	Enforcement Agency:	CV.	10
Dwelling Address:	Permit Number:	104	174.
City and Zip Code:	Permit Application Date:	114	NV.

#### A. VCHP System Information

Procedures for verification of VCHP compliance credit eligibility are described in the Energy Code Reference Appendices Section RA3.4.4.

01	SC System ID/Name from CF1R	YO OV
02	SC System Description of Area Served	
03	Conditioned Floor Area Served by the System (ft <sup>2</sup> )	
04	Status: Refrigerant charge verification from MCH-25	
05	Verification: Is conditioned airflow supplied to all habitable rooms in accordance with the	
05	procedure in RA3.1.4.1.7?	
Notes	s:	

#### **B. VCHP Indoor Unit Information**

Ducted indoor units are required to be certified to the Energy Commission as low static systems, and included in the list of certified indoor units published on the Energy Commission website at https://www.energy.ca.gov/rules-and-regulations/building-energy-efficiency/manufacturer-certification-building-equipment

01	02	03	04	05	06	07	08	09
Indoor Unit Name or Description of Area Served	Installed Indoor Unit Type	Indoor Unit Duct Status	Conditioned Floor Area Served By The Indoor Unit (ft <sup>2</sup> )	Number of Air Filter Devices on Indoor Unit	Indoor Unit Required Minimum System Airflow Rate (cfm)	Status: Airflow Rate Verification from MCH-23	Is Field Verification of Default Non-Continuous Fan Operation Required?	
Notes:	in'		0					



VARIABLE CAPACITY HEAT PUMP COMPLIANCE CREDIT



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#### C. Verification: Ducted Indoor Units Located Entirely in Directly Conditioned Space - RA3.1.4.3.8

Ducted indoor units shall be verified in accordance with the Verified Low Leakage Ducts in Conditioned Space procedure in Section RA3.1.4.3.8

01	02	03	04
Indoor Unit Name or Description of Area Served	A Visual Inspection Shall Confirm the Space Conditioning Distribution System Location(RA3.1.4.1.3)	Measured Duct Leakage to Outside (cfm) Using RA3.1.4.3.4	Compliance Statement:
			0' N'
			C 7 4
Notes:			

### D. Verification: Ductless Indoor Units Located Entirely in Directly Conditioned Space - RA3.1.4.1.8

A visual inspection shall confirm that ductless indoor units are located entirely in conditioned space in accordance with the procedures of RA3.1.4.1.8.

01	02 03
Indoor Unit Name or Description of Area Served	Indoor Unit Installation Location Verification
Notes:	

#### E. Verification: Wall Mounted Thermostats - RA3.4.5

1

Field verification according to the procedure in RA3.4.5 shall confirm that VCHP space conditioning zones that are greater than 150 ft<sup>2</sup>, are controlled by a permanently installed wall-mounted thermostat

01	02	03	04	05
Indoor Unit Name or Description of Area Served	Is a Wall-mounted Thermostat Installed in the Zone Served by the Indoor Unit?	Does the Thermostat Control the Zone's Indoor Unit?	Is the Thermostat Mounted Permanently to the Wall?	Compliance Statement:
	101	Kr .		
Notes:	0			I

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#### F. Verification: Non-Continuous Fan Operation - RA3.4.6

If the certificate of compliance indicates non-continuous indoor unit fan operation was specified for compliance credit, then the system shall be field verified in accordance with the procedures in SC3.4.6 to confirm that the installed system's indoor unit + outdoor unit combination does not operate the fan continuously when the system thermostat is not calling for conditioning.

01	02	03	04	05
Indoor Unit Name or Description of Area Served	Is Non-Continuous Default Fan Operation Shown in CEC Certification Listings?	Does Indoor Unit Air Distribution Fan Operate When There Is No Call For Heating?	Does Indoor Unit Air Distribution Fan Operate When There Is No Call For Cooling?	Compliance Statement:
			0 0	
			0 0	
Notes:		10		

### G. Verification: Installed Air Filter Sizing and Pressure Drop - RA3.1.4.7 and RA3.1.4.8

Nominal 2-inch or greater depth air filters shall be sized by the system designer to accommodate a maximum allowable clean-filter pressure drop of 0.1 inch w.c at the air filter's design airflow rate as verified according to the procedures in RA3.1.4.8. Nominal one-inch minimum depth air filters shall be allowed if the filter face area is sized based on a maximum face velocity of 150 ft per minute at the air filter design airflow rate according to the procedures in RA3.1.4.7. In order to inform the occupant of the airflow and clean filter pressure drop performance required for replacement air filters, the installer shall place a sticker in or near the filter grille displaying the air filter design airflow rate and the maximum allowed clean filter pressure drop at the design airflow rate as required by Standards Section 150.0(m)12Biv.

01	02	03	04	05	06	07	08	09	10	11	12
			>	5	11.	200 1919	2			Air Filter	
			0			1	<b>U</b>			Rated	
Indoor Unit			Design			A.	Air Filter	Air Filter		Pressure	
Name or	Air Filter		Airflow Rate	Air Filter	Air Filter	Air Filter	Calculated	Required		Drop at	Air Filter
Description	Name or	_ 1	for Air Filter	Nominal	Nominal	Nominal	Nominal	Minimum		Design	Pressure
of Area	Description	Air Filter	Device	Depth	Length	Width	Face Area	Face Area	Face Area	Airflow Rate	Drop
Served	of Location	Device Type	(cfm)	(inch)	(inch)	(inch)	(inch <sup>2</sup> )	(inch <sup>2</sup> )	Compliance	(inch W.C.)	Compliance
	0.4	11			5						
		1		2	XV						
Notes:	1		0.	1							

### H. VCHP System Compliance Statement

01

**HERS Provider:** 

### VARIABLE CAPACITY HEAT PUMP COMPLIANCE CREDIT



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### SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

#### DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

1. The first this certificate of Vermeation accumentation is acc	
Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
Address:	CEA/HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

### **RESPONSIBLE PERSON'S DECLARATION STATEMENT**

- 2. I certify the following under penalty of perjury, under the laws of the state of California:
  - 1. The information provided on this Certificate of Verification is true and correct.
  - 2. I am the certified HERS Rater who performed the verification identified and reported on this Certificate of Verification (responsible rater).
  - 3. The installed features, materials, components, manufactured devices, or system performance diagnostic results that require HERS verification identified on this Certificate of Verification comply with the applicable requirements in Reference Appendices RA2, RA3, and the requirements specified on the Certificate of Compliance for the building approved by the enforcement agency.
  - 4. The information reported on applicable sections of the Certificate(s) of Installation (CF2R) signed and submitted by the person(s) responsible for the construction or installation conforms to the requirements specified on the Certificate(s) of Compliance (CF1R) approved by the enforcement agency.
  - 5. I understand that a registered copy of this Certificate of Verification shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to ensure this requirement is accomplished.
  - 6. I understand that a registered copy of this Certificate of Verification is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to ensure this requirement is accomplished.

### BUILDER OR INSTALLER INFORMATION AS SHOWN ON THE CERTIFICATE OF INSTALLATION

Company Name (Installing Subcontractor, General Contractor, or Builder/Owner):				
Responsible Builder or Installer Name:	CSLB License:			

### HERS PROVIDER DATA REGISTRY INFORMATION

Sample Group Number (if applicable):	Dwelling Test Status in Sample Group (if applicable):



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#### HERS RATER INFORMATION

HERS Rater Company Name:		× 2	
Responsible Rater Name:	Responsible Rater Signature:	100	1/2.
Responsible Rater Certification Number w/ this HERS Provider:	Date Signed:	alle	110

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

#### CF3R-MCH-33-H User Instructions

#### Section A. VCHP System Information

- 1. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 2. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 3. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 4. This field is filled out automatically. It is referenced from the CF2R-MCH-25 which must be completed prior to this document.
- 5. Perform the verification specified by RSC3.1.4.1.7 and select the value that describes the result of the verification.

### Section B. VCHP Indoor Unit Information

- 1. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 2. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 3. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 4. Accept the default value from theCF2R, otherwise enter the conditioned floor area served by the indoor unit a value in ft<sup>2</sup>.
- 5. Accept the default value from the CF2R, otherwise enter the number of air filter devices on this indoor unit.
- 6. This field is filled out automatically. It is referenced from the CF2R-MCH-23 which must be completed prior to this document.
- 7. This field is filled out automatically. It is referenced from the CF2R-MCH-23 which must be completed prior to this document.
- 8. This field is filled out automatically. It is referenced from the Certificate of Compliance which must be completed prior to this document.
- 9. Navigate to the URL for the Manufacturer certification listings and determine whether the installed system is included in the CEC listing, then select the value that describes the result of the verification.

# Section C. Verification: Ducted Indoor Units Located Entirely in Directly Conditioned Space - RA3.1.4.3.8

- 1. This field is filled out automatically. It is referenced from a different section of this document.
- 2. Select the statement that best describes the location of the ducted distribution system.
- 3. Enter the leakage to outside airflow determined from the RA3.1.4.3.8
- 4. This field is filled out automatically

### Section D. Verification: Ductless Indoor Units Located Entirely in Directly Conditioned Space - RA3.1.4.1.8

- 1. This field is filled out automatically. It is referenced from a different section of this document.
- 2. Select the statement that best describes the indoor unit installation location as determined according to RA3.1.4.1.8.
- 3. This field is filled out automatically

Variable Capacity Heat Pump (VCHP) Compliance Credit

# Section E. Verification: Wall Mounted Thermostats - RA3.4.5

- 1. This field is filled out automatically. It is referenced from a different section of this document.
- 2. Answer yes or no to the question: Is a wall-mounted thermostat installed in the zone served by the indoor unit?
- 3. Answer yes or no to the question: Does the thermostat control the zone's indoor unit?
- 4. Answer yes or no to the question: Is the thermostat mounted permanently to the wall?
- 5. This field is filled out automatically

### Section F. Verification: Non-Continuous Fan Operation RA3.4.6

- 1. This field is filled out automatically. It is referenced from a different section of this document.
- 2. Select the best response to the question: Is non-continuous default fan operation shown in CEC certification listings?
- 3. Select the best response to the question: Does indoor unit air distribution fan operate when there is no call for heating?
- 4. Select the best response to the question: Does indoor unit air distribution fan operate when there is no call for cooling?
- 5. This field is filled out automatically

# Section G. Verification: Installed Air Filter Sizing and Pressure Drop - RA3.1.4.7 and RA3.1.4.8

- 1. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 2. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 3. This field is filled out automatically. It is referenced from the CF2R-MCH-01 which must be completed prior to this document.
- 4. This field is filled out automatically. It is referenced from another section on this document, or from the CF2R-MCH-01 which must be completed prior to this document.
- 5. Enter the nominal depth of the air filter in inches.
- 6. Enter the nominal length of the air filter in inches.
- 7. Enter the nominal width of the air filter in inches.
- 8. This field is filled out automatically by calculating the product of air filter length and air filter width.
- 9. This field is filled out automatically based on the depth of the filter.
- 10. This field is filled out automatically
- 11. Input the pressure drop at the design airflow rate from the performance data information published on the air filter label.
- 12. This field is filled out automatically

# Section H. VCHP System Compliance Statement

1. This field is filled out automatically

CERTIFICATE OF VERIFICATION – USER INSTRUCTIONS	CF3R-MCH-33-H
Variable Capacity Heat Pump (VCHP) Compliance Credit	(Page 3 of 3)

#### **Documentation Declaration Statements**

- 1. The person who prepared the CF3R 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 (if applicable) for their company, responsible builder or installer name, CSLB license number, sample group number, dwelling test status in sample group, HERS Rater company name, HERS Rater name, HERS Rater signature, HERS Rater certification number and date signed.