

**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING**

(Page 1 of 2) CF-4R-PV

Project Address <b>51 Main - Folsom, CA 95630</b>		Builder Name <b>Builder Three</b>
Builder Contact	Telephone	PV ID Number <b>123-456</b>
HERS Rater <b>Charlie Bachand</b>	Telephone <b>N/A</b>	Sample Group Number <b>26533</b>
Certifying Signature		
Firm <b>CalCERTS</b>		
Street Address / <b>31 Natoma Street</b>		
City / State / Zip <b>Folsom / CA / 95630</b>		
		Climate Zone <b>3</b>

**Copies to: BUILDER / APPLICANT (attach to NSDP 2.0), HERS RATER  
HERS RATER COMPLIANCE STATEMENT**

The house was  Tested  Approved as part of sample testing, but was not tested.  
As the HERS rater providing diagnostic testing and field verification, I certify that the PV system on the house identified on this form complies with all applicable requirements of the Field Verification and Diagnostic Testing of Photovoltaic Systems as specified in the New Solar Homes Partnership Guidebook, Appendix 4, and as checked on this form.  
-Note that to PASS and receive incentive all criteria are met.

The CF-6R-PV form and all appropriate documentation were provided upon inspection.

**REQUIREMENTS FOR COMPLIANCE CREDIT**

**PHOTOVOLTAIC SYSTEM:**

Equipment Type	CEC Certified Manufacturer Name and Model Number	Indicate Pass/Fail					
Meter <small>(Must be built into inverter or listed as eligible under NSHP.)</small>	Built Into Inverter	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail					
Inverter <small>(Must be same as listed on CF-1R-PV.)</small>	SMA America SWR2500U (240V)	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail					
PV Modules: <small>(Must be same as listed on CF-1R-PV.)</small> <input type="checkbox"/> Rack-mount <input checked="" type="checkbox"/> BIPV	Example Module						
	<table border="1"> <tr> <td>Number of series modules in each string</td> <td>1</td> <td>Number of strings in parallel</td> <td>48</td> <td>Total number of modules</td> <td>48</td> </tr> </table>	Number of series modules in each string	1	Number of strings in parallel	48	Total number of modules	48
Number of series modules in each string	1	Number of strings in parallel	48	Total number of modules	48		

Installation Specifications	Method used to determine value	Value Measured	Value within tolerance of CF-1R-PV value.
1 Azimuth of the installation <small>(degrees from North)</small>	Compass	180 degrees	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
2 Roof pitch/tilt of the installation <small>(Rise:Run / degrees from horizontal)</small>	Level	22.6 degrees	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
3 Mounting height of the installation <small>(One story, two story or ft above ground)</small>	Visual	One-Story	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
4 Standoff height of the installation <small>(If BIPV, enter 0)</small>	N/A	0	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Performance Specifications	Method used to determine value	Value Measured	Value within tolerance of CF-1R-PV value.
5 Measurement of solar irradiance (W/m <sup>2</sup> )	Pyranometer	123	
6 Measurement of ambient temperature (°C)	Thermometer	15	
7 Expected output from Field Verification Table (FVT) * (W)	FVT	333	
8 The electric production (W) as shown on the inverter or other performance display is equal to or higher than the value on the FVT for the system based on the incident radiation and ambient temperature measured.		444	line 8 > line 7 <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

\*FVT is generated by the CEC PV Calculator and is unique for each system. The FVT for this system is on the corresponding CF-1R-PV

Site Address

**51 Main - Folsom, CA 95630**

Permit Number

Shading Specifications		Value Measured	Value within tolerance of CF-1R-PV value.
9	Was "Minimal Shading" option used for all orientations?	No	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
10	Existing and planned trees are sited to meet the 2:1 criteria for minimal shading or are accounted for in the calculation, based on the mature height of the species.	[See Table below]	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
11	The minimum distance-to-height ratio (2:1) criteria for minimal shading is met for all other shading obstructions** or accounted for in the calculation.	[See Table below]	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

\*\* As indicated in Appendix 4 of the NSHP Guidebook, the Minimal Shading Criterion are to include the following features:

- i. Any vent, chimney, architectural feature, mechanical equipment or other obstruction that projects above the roof of the residential building.
- ii. Any part of the neighboring terrain that projects above the room.
- iii. Any tree that is mature at the time of installation of the solar system.
- iv. Any tree that is planted or planned to be planted as part of the landscaping for the residential building (the expected performance must be based on the expected mature height of any tree planted or planned to be planted as part of the landscaping for the residential building).
- v. Any existing neighboring building.
- vi. Any planned neighboring building or if the lot adjacent to the solar system is undeveloped and the builder does not know what the building or other structures is planned for construction on that site, the shading must be based on the highest and closest dimensions of the building model offered by the builder or allowed by zoning.
- vii. Any telephone or other utility pole that is closer than thirty feet from the nearest point of the array.

In-field Shading Confirmation Table			Method 1	Method 2			Value confirmed by (e.g. tape measure, photographs, solarpathfinder diagram)
Orientation	"Minimal Shading"	Obstruction Type	Altitude Angle (degrees)	Horizontal Dist.	Vertical Dist.	Dist.-to-Height Ratio	
ENE [>55 to 79]	<input type="checkbox"/>	Small Tree (existing - not mature)	76			0.25	
E [>79 to 101]	<input checked="" type="checkbox"/>	N/A				2	
ESE [>101 to 124]	<input checked="" type="checkbox"/>	N/A				2	
SE [>124 to 145]	<input checked="" type="checkbox"/>	N/A				2	
SSE [>145 to 169]	<input checked="" type="checkbox"/>	N/A				2	
S [>169 to 191]	<input checked="" type="checkbox"/>	N/A				2	
SSW [>191 to 214]							
SW [>214 to 236]							
WSW [>236 to 259]							
W [>259 to 281]							
WNW [>281 to 305]	<input checked="" type="checkbox"/>	N/A				2	

SAMPLE Certificate