



# RESIDENTIAL SOLAR WATER HEATING

## SYSTEM SIZING VERIFICATION (FORM 1)

**INSTRUCTIONS:** Participating Contractor to complete all non-shaded areas. All shaded areas are for Official Use only. For questions, call (808) 537-5577.

Customer Name: \_\_\_\_\_ Work Order #: \_\_\_\_\_  
 Customer Phone: \_\_\_\_\_ Contractor Name: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Centralized Multi System:  Yes  No  
 Contact Phone: \_\_\_\_\_ Collector Access:  One Story  Multi Story  
 Tank Access:  Secured  Unsecured

Subcontractor(s) Used:  Yes  No If YES, Name & License #: \_\_\_\_\_  
 Location of Installation:  O'ahu  Molokai  Lāna'i  Maui  Hawai'i

**SYSTEM DATA – CHART 1**

		Accepted	Denied
1	Installation Reason <input type="checkbox"/> Burnout <input type="checkbox"/> Retrofit		
2	Previous Water Heater Type <input type="checkbox"/> Electric <input type="checkbox"/> Heat Pump <input type="checkbox"/> Solar <input type="checkbox"/> None		
3	System Type <input type="checkbox"/> Active <input type="checkbox"/> Passive		
4	Neighborhood / Community		
5	Sunshine Zone <input type="checkbox"/> 350 <input type="checkbox"/> 400 <input type="checkbox"/> 450 <input type="checkbox"/> 480 <input type="checkbox"/> 500 <input type="checkbox"/> 550		
6	Collector Manufacturer		
7	Collector Model No.		
8	Collector Size <input type="checkbox"/> 3' x 7' <input type="checkbox"/> 3' x 8' <input type="checkbox"/> 4' x 6' <input type="checkbox"/> 4' x 8' <input type="checkbox"/> 4' x 10'		
9	Absorber Coating <input type="checkbox"/> Chrome <input type="checkbox"/> Paint		
10	Collector Orientation _____ degrees (true)		
11	Collector Orientation Factor _____ % derating (Chart 1: Collector Orientation Factor Compass)		
12	Collector Mounting Method <input type="checkbox"/> Flush <input type="checkbox"/> Side tilt <input type="checkbox"/> End tilt		
13	Collector Tilt _____ degrees		
14	Collector Tilt Factor _____ % derating (Table 3: Tilt Factor Table)		
15	Back-Up Heating Type <input type="checkbox"/> Electric <input type="checkbox"/> Gas <input type="checkbox"/> Heat Pump		
16	Pump Type <input type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> None		

**SIZING: HOT WATER STORAGE**

	<u>Gal. / Day</u>	<u>Line</u>
• Hot Water Use: Total number of occupants _____ x 20 gal./day	_____	1
• Required Storage	_____	2
• Actual System Storage Selected (from Table 2, SWH Handbook)		
Tank #1	<u>Gallons</u>	<u>Daily BTU Requirement</u>
Tank #2	_____	3
Tank #3	_____	4
Tank #3	_____	5
• Total Actual System Storage: (add Lines 3, 4 and 5)	_____	_____

**SIZING: SOLAR COLLECTOR(S)**

	<u>BTU / Day Output</u>		
• BTU/Day Output for Solar Collector(s) (from Table 6, SWH Handbook)	Model 1: _____	Model 2: _____	7
• Number of Collectors per Model	Model 1: _____	Model 2: _____	8
• Sub-Total: Collector BTU/Day Output (multiply Lines 7 and 8)	Model 1: _____	Model 2: _____	9
• Total Collector BTU/Day Output (add Model 1 and Model 2 from Line 9)	_____		10
• Derating BTU Output/Day: Orientation _____°; Factor _____% (from Chart 1) x Line 10	_____		11
Tilt _____°; Factor _____% (from Chart 1) x Line 10	_____		12
• Adjusted Collector BTU/Day Output (Subtract Lines 11 and 12 from Line 10)	_____		13

**SOLAR FRACTION**

• Percent Solar Fraction (Divide Line 13 by Line 6)	_____ %	14
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Inspector:	Customer Present:	Date:	Form 1: <input type="checkbox"/> Accepted <input type="checkbox"/> Denied
Comments:			