

**EXAMPLE**

**CF-SR- Solar Water Heating Calculation Form**

**OG-300**

Property Name: \_\_\_\_\_

Building Type: (Single Family, Multi-family): Single Family

Total Conditioned Floor Area (CFA)ft<sup>2</sup>: 2500

Climate zone (1-16): 2

**INPUTS FOR SYSTEMS SRCC OG-300:**

1.	Enter Solar Energy Factor of OG-300 solar water heating system as listed in SRCC directory	3.40
2.	Energy Factor of Water Heater (enter .6 for gas .9 for electric)	0.90
3.	Constant - 41045 (amount of energy used in SRCC test )	41045.00
4.	Constant - 3500 average parasitic loss value in SRCC test	3500.00
5.	Gallons per day use value calculated as: ( 21.5 x .0014 x CFA) from top of page	75.25
6.	Constant – 64.3 gallons used in SRCC test method	64.30
7.	Constant Hot water supply temperature 135 degrees	135.00
8.	Enter inlet water temperature (inlet water temperature values are listed on Table 1 by Climate Zone)	57.52
9.	Difference in supply and inlet water temperature (subtract line 7 from line 8)	77.48
10.	Constant - 1500 Solar radiation value used in SRCC test	1500.00
11.	Solar radiation level from Table 1 below	1219.58

**CALCULATION FOR SYSTEM**

12.	Multiply line 2 by line 3	36940.50
13.	Divide line 12 by line 1	10864.85
14.	Divide line 5 by line 6	1.17
15.	Divide the result in line 9 by 77	1.01
16.	Subtract 1 by line 2	0.10
17.	Multiply lines 13 by line 14 by line 15	12794.90
18.	Multiply lines 4 by line 16	350.00
19.	Add line 17 to line 18	13144.90
20.	Divide line 19 by line 3	0.32
21.	Divide line 10 by line 11	1.23
22.	Multiply line 20 by line 21	.39
23.	Subtract 1 from line 22	0.61
<b>Solar Fraction</b>		<b>0.61</b>

**Table 1**

Climate Zone	Water Temperature	Solar Radiation	Climate Zone	Water Temperature	Solar Radiation
1	53.90	1220	9	63.76	1685
2	57.52	1220	10	63.76	1612
3	57.69	1533	11	61.00	1580
4	59.12	1601	12	59.65	1670
5	57.93	1602	13	63.99	1726
6	61.55	1599	14	61.48	1827
7	62.63	1586	15	73.55	1884
8	62.97	1682	16	50.54	1513