

California Energy Commission Solar or Wind Energy System Credit Worksheet

Example

This example shows you how to calculate the Rated Peak Generating Capacity ("RPGC") of your solar and/or wind energy system using the Commission's Solar or Wind Energy System Credit Worksheet. It also assists you in determining whether your solar and/or wind energy system is "certified" by the Commission. This example is based on the information contained in the following sample invoice. The date of installation is the date of the building permit final inspection signoff (not shown here). The following example is for a solar energy system.

YOUR SOLAR COMPANY 123 MAIN STREET YOUR TOWN, CA 9xxxx	Date: <u>August 10, 2005</u>	INVOICE																								
<u>Bill to</u> Jane Doe 123 My Street Mytown, CA 9xxxx	<u>Physical address of Installation</u> Jane Doe 123 My Street Mytown, CA 9xxxx																									
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">QTY</th> <th style="text-align: left;">DESCRIPTION</th> <th style="text-align: left;">Unit Price</th> <th style="text-align: left;">Total Cost</th> </tr> </thead> <tbody> <tr> <td>30</td> <td>160W BP3160B (Photovoltaic modules)</td> <td>\$ 600 ea</td> <td>\$18,000</td> </tr> <tr> <td>2</td> <td>SMA SWR 2500U-SBD 240 volt (inverters)</td> <td>\$2,000 ea</td> <td>\$ 4,000</td> </tr> <tr> <td colspan="3"></td> <td>Subtotal \$22,000</td> </tr> <tr> <td colspan="3"></td> <td>Tax @7.75% \$ 1,705</td> </tr> <tr> <td colspan="3"></td> <td>TOTAL \$23,705</td> </tr> </tbody> </table>	QTY	DESCRIPTION	Unit Price	Total Cost	30	160W BP3160B (Photovoltaic modules)	\$ 600 ea	\$18,000	2	SMA SWR 2500U-SBD 240 volt (inverters)	\$2,000 ea	\$ 4,000				Subtotal \$22,000				Tax @7.75% \$ 1,705				TOTAL \$23,705		
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Please note that the prices shown are examples only, and should not be considered "typical" or real prices. Also note that in this example the costs of labor, wiring, support structures, etc. are not included. Call the California Franchise Tax Board (800) 852-5711 or (916) 845-6500 for information regarding documentation of cost paid or incurred including installation of the solar or wind energy system.

A. System Information

1. Purchaser's Name and address.....	<u>Jane Doe</u>
	<u>123 My Street, Mytown, CA 9xxxx</u>
2. Address of Installation	<u>Same as above</u>
3. Installer's Name and address.....	<u>Self-installed</u>
4. Date System Purchased:	
a. Photovoltaic Modules:	<u>August 10, 2005</u>
b. Wind Turbines:	<u>not applicable</u>
c. Inverters:.....	<u>August 10, 2005</u>
5. Date System Installed.....	<u>Nov.10, 2005</u>
6. System type:	<input checked="" type="checkbox"/> Photovoltaic <input type="checkbox"/> Wind <input type="checkbox"/> Both

B. Photovoltaic Energy Systems

A	B	C	D	E=C x D
Make and Model #	Certification #	# of Modules	PTC Rating (watts)	Output (watts)
<u>BP3160B</u>	<u>*****</u>	<u>30</u>	<u>142.1</u>	<u>4263</u>
Total PV Electrical Output of System:				<u>4263</u> watts

(Example continued on following page)

C. Wind Energy Systems

A Make and Model #	B Certification #	C # of Turbines	D Power Rating (watts)	E=C x D Output (watts)
None				
Total Wind Electrical Output of System:				0 watts

D. Inverters

A Make and Model #	B Certification #	C Quantity	D Power (watts)	E Efficiency (%)	F=CxD (watts)	G=ExF (%-watts)
SMA SWR 2500U-SBD 240v	IN033ac	2	2500	93	5000	4650
Totals:					5000	4650
Average Inverter Efficiency of the System						
= (Total Column G) / (Total Column F)						
= (4650) / (5000) = 93.0 %						

E. Calculation of Rated Peak Generating Capacity of System:

1. Enter total PV Electrical Output from Section B, Column E.	4263 Watts
2. Enter Total Wind Electrical Output from Section C, Column E.	0 Watts
3. Add Line 1 and Line 2.	4263 Watts
4. Enter Average Inverter Efficiency from Section D	93 %
5. Multiply Line 3 by Line 4.	3965 Watts
6. If Line 5 is greater than total for Section D, Column F, enter total from Section D, Column F. If Line 5 is less than Section D, Column F, enter total from Line 5. This is the Rated Peak Generating Capacity of System.	3965 Watts

In this example, the taxpayer would enter the Rated Peak Generating Capacity of 4612.2 on Part III, line 1 of FTB Form 3508. The taxpayer would then retain the completed worksheet to FTB Form 3508 and copies of the applicable lists of approved equipment (e.g., List of Approved Photovoltaic Modules for the 2005 tax year, and List of Approved Inverters for the 2005 tax year) with his or her tax records and make this information available to the Franchise Tax Board upon request.

Is the System Certified?

In this example, the solar energy system uses thirty BP3160B photovoltaic modules and two SMA SWR 2500U-SBD 240 volt inverters. The solar energy system uses no other photovoltaic modules or inverters. The system was purchased on August 10, 2005 and the installation was completed on November 10, 2005. The photovoltaic modules are listed on the Commission's List of Approved Photovoltaic Modules for the 2005 tax year and were certified at the time the system was purchased and installed. The BP3160B photovoltaic module has a beginning certification date of 1/7/2003 and the certification number is PV046ea. The inverter is listed on the Commission's List of Approved Inverters for the 2005 tax year and was certified at the time the system was purchased and installed. On April 29, 2005, the method for calculating inverter efficiencies was changed from ¼ load to a weighted average at various load points. Because the inverters in this example were purchased after April 29, 2005, the certification number is IN033ac. This inverter has an ending certification date that is "current"; meaning the inverter is currently certified with a weighted efficiency at various load points.

The solar energy system is certified by the Commission, since it only uses photovoltaic modules and inverters that are listed by the Commission and were certified on the date the solar energy system was purchased or installed. Check "Yes" on Part I, line 6 of FTB Form 3508.