



## **Blue Oak Energy Offers Free Online Photovoltaic System Design Tool**

PRESS RELEASE, May 10, 2007

The Blue Oak Energy's "PV Selection Guide" allows a system designer to successfully match modules and inverters in multiple configurations. This tool is unique and universal, allowing the user to view the results from pairing any inverter and solar module on the market in the United States.

The photovoltaics market now offers more inverters and solar modules from manufacturers worldwide. The ranges of electrical characteristics vary considerably across these new products. The goal for this PV system design tool is to assist a successful on-grid PV system design.

According to Tobin Booth, Blue Oak's President, "This design tool fits our goals to reduce costs, streamline the design process and increase solar electric system quality. We offer this tool as a free service for all PV industry designers."

As the global solar PV economy continues to expand, this tool is intended to help designers and product companies optimize their products and designs.

### **About Blue Oak Energy**

Blue Oak Energy is an engineering firm for utility / commercial scale solar electric systems. The company is responsible for engineering activities on some of the largest and most prominent US based solar electric projects. Blue Oak Energy is a member of the 1% For The Planet alliance where a percentage of company's annual earnings are donated to organizations protecting our natural resources. The company is located in Davis, California. Blue Oak also produces the Homerun(TM) Combiner Box, which was developed by a team of experienced engineers and electricians to reduce the cost and simplify the installation of large PV systems. More information on Blue Oak Energy be found online at [www.blueoakenergy.com](http://www.blueoakenergy.com).

## Screen Capture of Blue Oak Energy's Online Tool

Blue Oak Energy: Photovoltaic Selection Guide - Windows Internet Explorer

http://www.blueoakenergy.com/sizer/index.php
Google

File Edit View Favorites Tools Help

Links ADP BOE CEC Dictionary.com FedEx Fidelity IBackup NOAA PG&E REAccess Solarbuzz SGIP SWA

Google Go Bookmarks 15 blocked Check AutoLink AutoFill Send to Settings

Renewable Energy Access - ... Blue Oak Energy: Photov...

BLUE OAK ENERGY  
Expertise in solar electric engineering services

Photovoltaic Selection Guide

[Glossary of terms](#)
 [Print this page](#) (May require configuring your printer for best output)

Please choose the array operating temperatures, inverter make and model, and module make and model below.

Configuration Options:

Temperature	
Celsius or Fahrenheit	Fahrenheit
Select Lowest Ambient Temp	32
Select Highest Ambient Temp	104

Inverter Selection

Manufacturer:	SMA America	
Inverter:	SB7000US (240V)	
Power Rating @ 25C	7000	W
Max. DC Input Current	30	A
Maximum Input DC Voltage	600	V
Minimum Peak Power Tracking	250	V
CEC Efficiency	96	%

Module Selection

Manufacturer:	Evergreen Solar	
Module:	ES-190-RL	
Max Power Voltage	26.7	V
Open Circuit Voltage	32.8	V
Voltage Temp Coeff	-0.11152	V/°C
Nominal Power Rating	190	W
Max Power Current	7.12	A
Current Temp Coeff	0.00483	A/°C
PTC Power Rating	168.8	W

View the results here.

Output Results:

Largest 50%		12 Modules	13 Modules	14 Modules	15 Modules	16 Modules
3 Strings	STC	6840	7410	7980	8550	9120
	PTC	6077	6583	7090	7596	8102
	CEC	5834	6320	6806	7292	7778
2 Strings	STC	4560	4940	5320	5700	6080
	PTC	4051	4389	4726	5064	5402
	CEC	3889	4213	4537	4861	5186

  

	12 Modules	13 Modules	14 Modules	15 Modules	16 Modules
Max Voc at Min Temp (Vdc)	427.06	462.64	498.23	533.82	569.41
Min Vmp at Max Temp (Vdc)	260.18	281.86	303.54	325.22	346.91

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Done

Internet

100%