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Solar Array Sizing Form

Use the worksheet below to determine your solar requirements. We have included an example column and a column for your system.

1. Find hours of "FULL SUN" in the deployment area. If you do not know, there are maps that can help you determine this.
2. Enter daily Watts-Hours.
3. Divide line 2 by line 1. This is the number of "watts" we need to generate per hour of full sun.
4. Find actual power produced by your selected module and enter it in 4. (Rated amperage x battery voltage during charging).
   Example: Using KC120's, one module produces 7.1 amps. 13 volts is a common charging voltage for 12 volt systems. Actual power = amperage x charging voltage.
5. Divide line 3 by line 4. The result is the number of modules required for your system. When rounding this number, remember that sets of 2 modules are needed for a 24 volt system, sets of 4 for 48 etc.
6. ***Conclusion:*** In the example 2.17 panels are needed therefore rounding to 3 panels for a 12 VDC system, then for a 24 VDC systems 6 panel would be required and for a 48 VDC 12 panels are needed.

	Example	Actual Figures
Step	**yearly average**	**yearly average**
1	**5.0 sun hours per day**	
2	**1000 watt-hours per day**	
3	**200 watts**	
4	**(7.1Ax13VDC) =92.3 Watts**	
5	**2.17 Panels 12VDC each**	