SolarRay's "RENEGADE" System: Example Uses

Appliance	Qty.	Run Watts	Hours /Day	Days /Week	W-hours /Day	Percent of Total	NOTES
DC Fluorescent Lights	2	25	6	7	300.0	44.1%	
DC 13" Color Television	1	70	4	7	280.0	41.2%	
DC Radio	1	5	5	7	25.0	3.7%	
DC Pressure Pump	1	150	0.5	7	75.0	11.0%	100Gal/ day from cistern
	Total Daily Average Watt-hrs				680.0		

PV System Worksheet

See Instruction File

ersion 2.0 8/99 adapted by SolarRay

Customer: Renegade Example
Date: Oct. 31, 2005
Prepared by: Ray

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Yellow boxes are for your changes & input

			TOTAL			
			LOAD =	**680**	**Watt-Hours per Day**	
EFFICIENCY ESTIMATES		Battery Average Efficiency		**88%**	773	
(See Instruction File)		Inverter Average Efficiency		**92%**	840	
		Wiring & Distribution Efficiency		**98%**	857	
			Energy to Be Generated		**857**	**Watt-Hours/Day**
DC System Voltage	**12**		Season of max. energy use		**Winter**	
Avg. Peak Sun Hrs/Day	**6**		PV:Battery mismatch + loss factor		**91%**	
Solar Tracker Gain ?	**0**		**PV Array Required**		**157**	**Watts (peak rating)**

PV ARRAY - Select size & quantity of PV modules

Full Array would be	**2**	**80**	**- Watt Modules =**	**160**	Watts
Proposed Array of	**2**	**Modules = total rated - - -**		**160**	Watts
Array voltage	**12**	Module voltage	**12**		

BATTERY BANK

Days of Energy Storage	**5**	At Maximum Depth of Discharge	**100%**	
		Batt Capacity at Low-Temp	**90%**	of 77°F standard rating
		Requires Battery Bank of	**397**	**Amp-Hours**
Battery amp-hr rating	**250**	Required number of batteries =	**3.2**	
Battery nom. Voltage	**6**	Proposed number of batteries =	**4**	
		for a Battery Bank of	**500**	**Amp-Hours**
		Proposed Days of Storage	**6.3**	