

COST ECONOMICS OF SOLAR ROOF TOP SYSTEM WITH NET METERING**(1 KW SOLAR ROOF TOP SYSTEM)**

S. No.	Appliance	Nos.	Wattage of each unit	No. of hours Total No. of working per day	Total units (Wh)
1	Tube Lights	4	40W	6 hours	960
2	Fans	4	60W	8 hours	1920
3	Refrigerators	1	180W	16 hours	2880
4	Electric Iron	1	750W	1 hour	750
5	Television	1	80W	8 hours	640
6	Computers	1	100W	3 hours	300
7	Washing machine	1	1500W	1 hour	1500
				Total	8950 Wh

- The power consumption per day is 8.95 KWh = 9 Units
- The power consumption in a month: 9 x 30 = 270 Units
- The energy charges a per the tariff order 2013-2014 is as follows

Rs. / KWh	
0 - 50	2.65
51 - 100	3.25
101 - 150	4.88
151 - 200	5.63
201 - 250	6.38
251 - 300	6.88
301 - 400	7.38
401 - 500	7.88
Above 500	8.30

- The Energy charges for 270 units = Rs.1277.1
- If 1 KW Solar Roof Top System is installed
 - Estimated cost of system - Rs.1, 10,000
 - MNRE subsidy - Rs. 30,000
 - State Subsidy - Rs. 20,000
 - Net cost of the system - Rs. 60,000
 - Expected generation per day - 4 units
 - Expected generation per month - 120 units
- The net energy consumed - 150 units (270 - 120)
- The Energy charges payable - Rs.539
- Net Savings per month - Rs.753.1
- Net savings per year - Rs.9037.2
- Payback period - 6.6 years
- Life of equipment - 25 years