

## Comparing Solar Thermal and Solar Photovoltaic

The chart following displays an average cost and return on investment (ROI) for a typical solar thermal hot water installation and a PV system. As can be seen, the solar thermal system has a much smaller footprint, costs a lot less and has a much higher efficiency than the PV system.

Description (estimated)	Solar Hot Water	PV System
Initial Investment	\$5,000.00 - \$9,000.00	\$30,000.00 - \$50,000.00
Federal Tax Credit (30%)	\$1,500.00 - \$2,700.00	\$ 9,000.00 - \$15,000.00
State Tax Credit (SC 25%)	\$1,250.00 - \$2,250.00	\$ 7,500.00 - \$12,500.00
Net Investment	\$2,250.00 - \$4,050.00	\$13,500.00 - \$22,500.00
Payback Time	5 to 10 years	10 years plus
System Life Expectancy	20 years plus	20 years plus
Required Space	40-80 sqft	see chart below
System Efficiency	80% plus	up to 15%
CO <sub>2</sub> Offset	31.8 ton of CO <sub>2</sub>	21.2 ton of CO <sub>2</sub>

### Area Calculation for PV Systems

Roof Area Needed in Square Feet (shown in Bold Type)							
PV Module Efficiency (%)	PV Capacity Rating (Watts)						
	100	250	500	1,000	2,000	4,000	10,000
4	<b>30</b>	<b>75</b>	<b>150</b>	<b>300</b>	<b>600</b>	<b>1,200</b>	<b>3,000</b>
8	<b>15</b>	<b>38</b>	<b>75</b>	<b>150</b>	<b>300</b>	<b>600</b>	<b>1,500</b>
12	<b>10</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>400</b>	<b>1,000</b>
16	<b>8</b>	<b>20</b>	<b>40</b>	<b>80</b>	<b>160</b>	<b>320</b>	<b>800</b>

For example, to generate 2,000 watts from a 12%-efficient system, you need 200 square feet of roof area.

Make your difference today - go solar with us!

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