

RESIDENTIAL SOLAR ECONOMICS



Interested in installing solar?

Residential Solar can be a large investment, and it takes a long time to pay off. Before you install a solar array, we have provided some general examples of the estimated cost and payback of installing solar based on [TVA's Solar Calculator](#).

The following table displays several data points, including the estimated payback period in months/years and monthly savings for solar that is installed to offset 20%, 80%, and 100% of each home's electricity usage.

Solar Costs/Payback Examples

	HOME 1 ¹			HOME 2 ¹			HOME 3 ¹		
Square Footage	1,400			1,800			2,800		
Average Electric Bill	\$100			\$130			\$200		
Electricity Use Covered by Solar (%)	20%	80%	100%	20%	80%	100%	20%	80%	100%
Annual Electricity Production (kWh) ²	1,700	6,802	8,502	2,336	9,343	11,679	3,818	15,273	19,091
System Size (kWDC)	1.36	5.43	6.78	1.86	7.45	9.32	3.05	12.18	15.23
# Solar Panels	5	19	23	7	25	32	11	41	51
System Cost ³	\$3,312	\$13,248	\$16,560	\$4,550	\$18,198	\$22,748	\$7,437	\$29,748	\$37,185
Original Net Electric Cost (Monthly) ²	\$107	\$107	\$107	\$137	\$137	\$137	\$208	\$208	\$208
New Net Electric Cost (Monthly) ²	\$93	\$65	\$61	\$117	\$79	\$74	\$175	\$113	\$104
Monthly Savings ²	\$14	\$42	\$46	\$20	\$58	\$63	\$33	\$95	\$104
Payback Period (Months)	237	316	360	228	314	362	226	314	358
Payback Period (Years)	19.75	26.33	30.00	19.00	26.17	30.17	18.83	26.17	29.83

¹In these examples, the Electricity Rate & Customer Charge are assumed to be 10.81 Cents / kWh , and \$19.71 / month.

²These values represent a 20 Year Average.

³System Cost is assumed to be \$3.13 / watt.

Please Note: These results reflect only an estimate of your system costs and payback based on TN Valley average figures and assumptions made on the performance of your system. The solar analysis provided by this tool is for illustrative purposes only, as the actual performance and cost of your solar system can vary based on numerous factors. These results do not constitute a representation by TVA or your Local Power Company regarding the accuracy of these results or a recommendation on whether you should install a solar system on your property.