



# Solar PV

## 50kWp Example



The following example demonstrates the performance of a 50kWp installation:

Output (kWh/kWp/yr)	1128
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System Specifics	
System Size (kWp)	50
Tilt (degrees)	40
Orientation (degrees)	0 (South)
Level of Overshadowing	None
Fitted to	Existing Building
Your Electricity Tariff (pence)	12
% of electric used during the day	95%

Annual Estimates	
Output (kWh)	56,400
CO2 Savings (tonnes)	29.84
Applicable FiT (pence)	4.59
FiT	£2,588.76
Electricity Savings	£6,429.60
Export Tariff	£0.00
Total Savings	£9,018.36



An installation of this size can cost as little as £45,000. The ROI has been modelled in the table below:

Year	Est. Generation (kWh)	FIT	Export	Money Saved	Cumulative Benefit
1	56,400	£2,589	£0	£6,430	£9,018
2	56,118	£2,641	£0	£6,717	£18,376
3	55,837	£2,693	£0	£7,018	£28,087
4	55,558	£2,747	£0	£7,332	£38,167
5	55,280	£2,802	£0	£7,660	£48,629
6	55,004	£2,858	£0	£8,003	£59,490
7	54,729	£2,915	£0	£8,361	£70,766
8	54,455	£2,974	£0	£8,735	£82,475
9	54,183	£3,033	£0	£9,126	£94,634
10	53,912	£3,094	£0	£9,534	£107,263
11	53,643	£3,156	£0	£9,961	£120,379
12	53,374	£3,219	£0	£10,407	£134,005
13	53,108	£3,283	£0	£10,873	£148,161
14	52,842	£3,349	£0	£11,359	£162,869
15	52,578	£3,416	£0	£11,867	£178,152
16	52,315	£3,484	£0	£12,399	£194,035
17	52,053	£3,554	£0	£12,953	£210,542
18	51,793	£3,625	£0	£13,533	£227,700
19	51,534	£3,697	£0	£14,139	£245,536
20	51,276	£3,771	£0	£14,771	£264,078
21	51,020	£0	£0	£15,432	£279,511
22	50,765	£0	£0	£16,123	£295,634
23	50,511	£0	£0	£16,844	£312,478
24	50,259	£0	£0	£17,598	£330,076
25	50,007	£0	£0	£18,386	£348,462
<b>Total</b>	<b>1,075,994</b>	<b>£62,900</b>	<b>£0</b>	<b>£285,562</b>	<b>£348,462</b>

<b>25 Year Investment Summary</b>	
Capital Cost of	£45,000
Profit of	£303,462
Simple Payback of	5 Years
Average saving	£13,938.48
Average return	30.97%
Lifetime Return	774.36%

Note: the table above assumes inflation at 2%, Electricity price increases of 5% per annum and module degradation at 0.5% per annum