

SAP 2009 / FIT November 1st 2012

Payback Calculations for Solar PV Systems

Energy Rating Data

Assumed annual rate of inflation	4.60%
Annual increase in energy cost	9.0%
Percentage of export	50%
Percentage of self consumption	70%
Annual Drop in system efficiency	0.5%
Imported electricity cost p/kwh	14

SAP Details

Roof Orientation	South
Roof Pitch	30°
Overshadowing	0 or very little <20%
EPC efficiency rating	EPC Cert =>D
Number of Panels	6
Size of Panels (Watt)	250

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% Return on investment APR over 20 years (on FIT income)

6.87%

SOLAR PV SYSTEM PRICE

£3,979.00

inc VAT

FIT rate p/kWh

15.44

FIT export rate p/kwh

4.5

System Size kWp

1.5

kWh / Year

1,288

CO ₂ Emission Savings kgCO ₂	Benefit over 20 years	kWh/annum	FIT Rate (Inc Inflation)	FIT Annual income	Cost of Electricity	Saving on Electricity Used	Export FIT Rate (Inc Inflation)	Export FIT revenue	Savings and Income per	Cumulative Benefit
675.47	Year 1	1288 kWh	15.44 p/kWh	£198.81	14.00 p/kWh	£126.18	4.5 p/kWh	£28.97	£353.96	£353.96
672.10	Year 2	1281 kWh	16.15 p/kWh	£206.91	15.26 p/kWh	£136.85	4.7 p/kWh	£30.15	£373.92	£727.88
668.74	Year 3	1275 kWh	16.89 p/kWh	£215.35	16.63 p/kWh	£148.42	4.9 p/kWh	£31.38	£395.15	£1,123.03
665.39	Year 4	1268 kWh	17.67 p/kWh	£224.13	18.13 p/kWh	£160.97	5.2 p/kWh	£32.66	£417.76	£1,540.79
662.07	Year 5	1262 kWh	18.48 p/kWh	£233.26	19.76 p/kWh	£174.58	5.4 p/kWh	£33.99	£441.84	£1,982.63
658.76	Year 6	1256 kWh	19.33 p/kWh	£242.77	21.54 p/kWh	£189.35	5.6 p/kWh	£35.38	£467.50	£2,450.13
655.46	Year 7	1249 kWh	20.22 p/kWh	£252.67	23.48 p/kWh	£205.35	5.9 p/kWh	£36.82	£494.85	£2,944.98
652.19	Year 8	1243 kWh	21.15 p/kWh	£262.97	25.59 p/kWh	£222.72	6.2 p/kWh	£38.32	£524.01	£3,468.99
648.92	Year 9	1237 kWh	22.13 p/kWh	£273.69	27.90 p/kWh	£241.55	6.4 p/kWh	£39.88	£555.13	£4,024.12
645.68	Year 10	1231 kWh	23.14 p/kWh	£284.85	30.41 p/kWh	£261.97	6.7 p/kWh	£41.51	£588.33	£4,612.45
642.45	Year 11	1225 kWh	24.21 p/kWh	£296.47	33.14 p/kWh	£284.12	7.1 p/kWh	£43.20	£623.79	£5,236.24
639.24	Year 12	1219 kWh	25.32 p/kWh	£308.55	36.13 p/kWh	£308.14	7.4 p/kWh	£44.96	£661.66	£5,897.90
636.04	Year 13	1212 kWh	26.49 p/kWh	£321.13	39.38 p/kWh	£334.20	7.7 p/kWh	£46.80	£702.13	£6,600.03
632.86	Year 14	1206 kWh	27.71 p/kWh	£334.23	42.92 p/kWh	£362.45	8.1 p/kWh	£48.71	£745.38	£7,345.41
629.70	Year 15	1200 kWh	28.98 p/kWh	£347.85	46.78 p/kWh	£393.10	8.4 p/kWh	£50.69	£791.64	£8,137.06
626.55	Year 16	1194 kWh	30.31 p/kWh	£362.03	50.99 p/kWh	£426.33	8.8 p/kWh	£52.76	£841.13	£8,978.18
623.42	Year 17	1188 kWh	31.71 p/kWh	£376.79	55.58 p/kWh	£462.38	9.2 p/kWh	£54.91	£894.08	£9,872.27
620.30	Year 18	1182 kWh	33.17 p/kWh	£392.16	60.59 p/kWh	£501.48	9.7 p/kWh	£57.15	£950.78	£10,823.05
617.20	Year 19	1177 kWh	34.69 p/kWh	£408.14	66.04 p/kWh	£543.88	10.1 p/kWh	£59.48	£1,011.50	£11,834.54
614.11	Year 20	1171 kWh	36.29 p/kWh	£424.78	71.98 p/kWh	£589.86	10.6 p/kWh	£61.90	£1,076.55	£12,911.09
12,886.65		24565 kWh		£5,967.57		£6,073.90		£869.63	£12,911.09	
TOTAL Benefit over 20 years										£12,911.09

* The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the Government's standard assessment procedure for energy rating of buildings (SAP) and is given as guidance only. It should not be considered as a guarantee of performance.