

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	8
Size of Panels (Watt)	250

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

7.83%

SOLAR PV SYSTEM PRICE

£4,655.00

inc VAT

FIT rate p/kWh

15.44

FIT export rate p/kwh

4.5

System Size kWp

2

kWh / Year

1,717

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
900.63	Year 1	1717 kWh	15.44 p/kWh	£265.07	14.00 p/kWh	£168.25	4.5 p/kWh	£38.63	£471.95	£471.95
896.13	Year 2	1708 kWh	16.15 p/kWh	£275.88	15.26 p/kWh	£182.47	4.7 p/kWh	£40.20	£498.56	£970.50
891.65	Year 3	1700 kWh	16.89 p/kWh	£287.13	16.63 p/kWh	£197.90	4.9 p/kWh	£41.84	£526.87	£1,497.37
887.19	Year 4	1691 kWh	17.67 p/kWh	£298.83	18.13 p/kWh	£214.63	5.2 p/kWh	£43.55	£557.01	£2,054.39
882.76	Year 5	1683 kWh	18.48 p/kWh	£311.02	19.76 p/kWh	£232.78	5.4 p/kWh	£45.32	£589.12	£2,643.51
878.34	Year 6	1674 kWh	19.33 p/kWh	£323.70	21.54 p/kWh	£252.46	5.6 p/kWh	£47.17	£623.33	£3,266.84
873.95	Year 7	1666 kWh	20.22 p/kWh	£336.90	23.48 p/kWh	£273.81	5.9 p/kWh	£49.09	£659.80	£3,926.64
869.58	Year 8	1658 kWh	21.15 p/kWh	£350.63	25.59 p/kWh	£296.96	6.2 p/kWh	£51.10	£698.68	£4,625.32
865.23	Year 9	1649 kWh	22.13 p/kWh	£364.93	27.90 p/kWh	£322.06	6.4 p/kWh	£53.18	£740.17	£5,365.49
860.91	Year 10	1641 kWh	23.14 p/kWh	£379.80	30.41 p/kWh	£349.29	6.7 p/kWh	£55.35	£784.45	£6,149.94
856.60	Year 11	1633 kWh	24.21 p/kWh	£395.29	33.14 p/kWh	£378.83	7.1 p/kWh	£57.60	£831.72	£6,981.66
852.32	Year 12	1625 kWh	25.32 p/kWh	£411.40	36.13 p/kWh	£410.86	7.4 p/kWh	£59.95	£882.21	£7,863.87
848.06	Year 13	1617 kWh	26.49 p/kWh	£428.18	39.38 p/kWh	£445.60	7.7 p/kWh	£62.40	£936.17	£8,800.04
843.82	Year 14	1608 kWh	27.71 p/kWh	£445.63	42.92 p/kWh	£483.27	8.1 p/kWh	£64.94	£993.85	£9,793.88
839.60	Year 15	1600 kWh	28.98 p/kWh	£463.80	46.78 p/kWh	£524.13	8.4 p/kWh	£67.59	£1,055.52	£10,849.41
835.40	Year 16	1592 kWh	30.31 p/kWh	£482.71	50.99 p/kWh	£568.45	8.8 p/kWh	£70.34	£1,121.50	£11,970.91
831.22	Year 17	1584 kWh	31.71 p/kWh	£502.39	55.58 p/kWh	£616.51	9.2 p/kWh	£73.21	£1,192.11	£13,163.02
827.07	Year 18	1577 kWh	33.17 p/kWh	£522.88	60.59 p/kWh	£668.63	9.7 p/kWh	£76.20	£1,267.71	£14,430.73
822.93	Year 19	1569 kWh	34.69 p/kWh	£544.19	66.04 p/kWh	£725.17	10.1 p/kWh	£79.30	£1,348.66	£15,779.39
818.82	Year 20	1561 kWh	36.29 p/kWh	£566.38	71.98 p/kWh	£786.48	10.6 p/kWh	£82.54	£1,435.40	£17,214.79
17,182.20		32753 kWh		£7,956.75		£8,098.53		£1,159.50	£17,214.79	

TOTAL Benefit over 20 years

£17,214.79

* 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.