PV Investment Analyser

PARAMETERS				31/05/2013
PROJECT		FIT SCHEME		
Site name	Example 30 kwp	Generation tariff	0.13	£/kWh
Location		Export tariff	0.05	£/kWh
EPC band D or above	Yes	Scheme duration	20	years
		Index-linked	Yes	
SYSTEM		EPC band D required	Yes	
Modules	TBC			
Inverter		CONSUMPTION / EXPORT		
Total Installed Capacity [kW]	30	Auto consumption rate	100 %	
Space required [m ²]		Export to the grid	o 50 %	
			meter	
PERFORMANCE				
Estimated generation [kWh/year]	25,000	GRID ELECTRICITY		
Simulation software adjustment	0.0 %	Cost of electricty	0.10	£/kWh
		Electricity inflation	9 %	
Power adjustment (tolerance, LID etc.)	0.0 %	Grid carbon factor	0.527	kg CO ₂ /kWh
Annual PV modules degradation	0.70 %			
Annual BOS degradation	0.1 %	FINANCIAL PARAMETERS		
Life time [years]	25	Inflation index	3.4 %	
		Bank account interest rate	1.0 %	
COSTS				
Total system cost	£38,000			
		CREDIT		
Initial system value depreciation	100 %			
Annual O&M costs				
Replacements/repairs (eg. inverter)	<u> </u>			

INVESTMENT ANALYSIS

Year	PV degr	BOS degr	PV generat.	FiT (gen)	FiT (exp)	FiT revenue	Electr cost	Electr savings	FiT + savings	O&M costs	Credit	Cost of capital	Cash flow	Cum cash flow	PV inv value	Simple ROI
	[%]	[%]	[kWh/year]	[£/kWh]	[£/kWh]	[£]	[£/kWh]	[£]	[£]	[£]	[£]	[£]	[£]	[£]	[£]	[%]
0	[7-]	(, -,	[, / 5]	[=/]	[=,]	[-]	[=/]	[-]	[-]	i-j	£0	(-)	-£38,000	-£38,000	£0	[7-5]
1	100.0%	100.0%	25,000	£0.13	£0.05	£3,820	£0.10	£2,500	£6,320	£0	£0	£0	£6,320	-£31,680	£6,320	-83%
2	99.3%	99.9%	24,800	£0.13	£0.05	£3,918	£0.11	£2,703	£6,622	£0	£0	£0	£6,622	-£25,058	£13,005	-66%
3	98.6%	99.8%	24,602	£0.14	£0.05	£4,019	£0.12	£2,923	£6,942	£0	£0	£0	£6,942	-£18,116	£20,077	-48%
4	97.9%	99.7%	24,405	£0.14	£0.05	£4,123	£0.13	£3,161	£7,283	£0	£0	£0	£7,283	-£10,833	£27,561	-29%
5	97.2%	99.6%	24,210	£0.15	£0.05	£4,229	£0.14	£3,417	£7,646	£0	£0	£0	£7,646	-£3,187	£35,483	-8%
6	96.5%	99.5%	24,017	£0.15	£0.05	£4,338	£0.15	£3,695	£8,033	£0	£0	£0	£8,033	£4,846	£43,870	13%
7	95.9%	99.4%	23,825	£0.16	£0.05	£4,449	£0.17	£3,996	£8,445	£0	£0	£0	£8,445	£13,290	£52,754	35%
8	95.2%	99.3%	23,634	£0.16	£0.06	£4,564	£0.18	£4,320	£8,884	£0	£0	£0	£8,884	£22,175	£62,165	58%
9	94.5%	99.2%	23,445	£0.17	£0.06	£4,681	£0.20	£4,672	£9,353	£0	£0	£0	£9,353	£31,527	£72,140	83%
10	93.9%	99.1%	23,258	£0.18	£0.06	£4,802	£0.22	£5,051	£9,853	£0	£0	£0	£9,853	£41,380	£82,714	109%
11	93.2%	99.0%	23,072	£0.18	£0.06	£4,925	£0.24	£5,462	£10,387	£0	£0	£0	£10,387	£51,767	£93,928	136%
12	92.6%	98.9%	22,888	£0.19	£0.07	£5,052	£0.26	£5,906	£10,958	£0	£0	£0	£10,958	£62,725	£105,825	165%
13	91.9%	98.8%	22,705	£0.19	£0.07	£5,182	£0.28	£6,386	£11,568	£0	£0	£0	£11,568	£74,293	£118,452	196%
14	91.3%	98.7%	22,523	£0.20	£0.07	£5,315	£0.31	£6,905	£12,220	£0	£0	£0	£12,220	£86,514	£131,856	228%
15	90.6%	98.6%	22,343	£0.21	£0.07	£5,452	£0.33	£7,467	£12,919	£0	£0	£0	£12,919	£99,432	£146,094	262%
16	90.0%	98.5%	22,165	£0.22	£0.07	£5,592	£0.36	£8,073	£13,666	£0	£0	£0	£13,666	£113,098	£161,220	298%
17	89.4%	98.4%	21,987	£0.22	£0.08	£5,736	£0.40	£8,730	£14,466	£0	£0	£0	£14,466	£127,564	£177,298	336%
18	88.7%	98.3%	21,812	£0.23	£0.08	£5,884	£0.43	£9,439	£15,323	£0	£0	£0	£15,323	£142,887	£194,395	376%
19	88.1%	98.2%	21,637	£0.24	£0.08	£6,035	£0.47	£10,207	£16,242	£0	£0	£0	£16,242	£159,129	£212,580	419%
20	87.5%	98.1%	21,464	£0.25	£0.08	£6,191	£0.51	£11,036	£17,227	£0	£0	£0	£17,227	£176,356	£231,933	464%
21	86.9%	98.0%	21,293	£0.00	£0.00	£0	£0.56	£11,933	£11,933	£0	£0	£0	£11,933	£188,289	£246,186	495%
22	86.3%	97.9%	21,123	£0.00	£0.00	£0	£0.61	£12,903	£12,903	£0	£0	£0	£12,903	£201,193	£261,551	529%
23	85.7%	97.8%	20,954	£0.00	£0.00	£0	£0.67	£13,952	£13,952	£0	£0	£0	£13,952	£215,145	£278,119	566%
24	85.1%	97.7%	20,786	£0.00	£0.00	£0	£0.73	£15,086	£15,086	£0	£0	£0	£15,086	£230,232	£295,987	606%
25	84.5%	97.6%	20,620	£0.00	£0.00	£0	£0.79	£16,313	£16,313	£0	£0	£0	£16,313	£246,544	£315,260	649%

RESULTS

PBT	5.4	years
ARR	30.0 %	
IRR	21.1 %	
AERR	8.8 %	

Future Value	£ 315,260		
Overall ROI	730%		
Net B/C ratio	6.5		

Avg generation	22743	kWh/year
Total generation	569	MWh
Total CO₂ savings	300	tonnes







