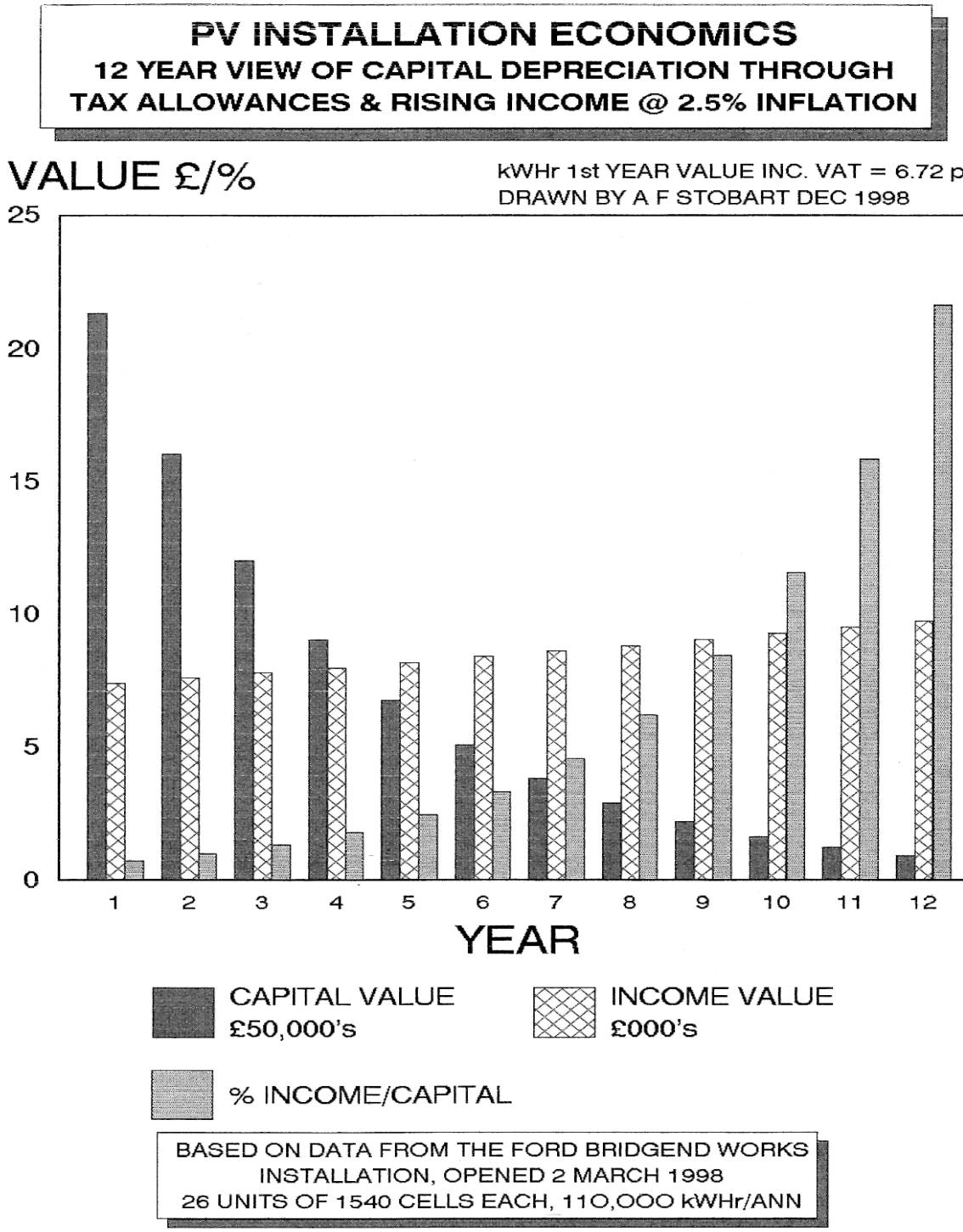
FINANCIAL INCENTIVES AND BENEFITS

The primary objective of any energy collection/production equipment is to create wealth for the owner, and a supply of energy both for the owner, and often also for other energy users.

The benefit of Renewable/Sustainable Energy Collection Equipment is that once the capital costs have been met, an energy supply continues "free" except for maintenance costs during the life of the equipment.

This also means that the energy value rises in line with inflation, i.e in effect the equipment's energy supply is "inflation proof" except for the necessary maintenance costs. In addition for commercial concerns able to use depreciation allowances to offset tax on profits there is a further benefit. See diagram below. Note electricity price is NOT including FIT which was not available then.

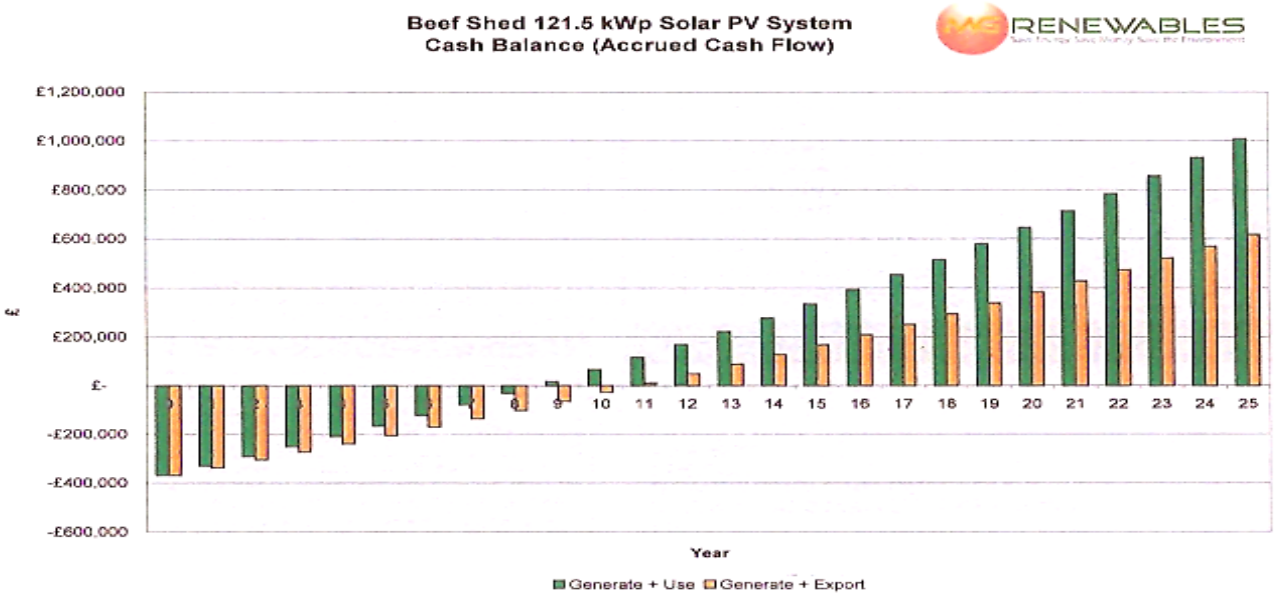


FINANCIAL INCENTIVES AND BENEFITS

Continued

With the advent of the Feed In Tariff for electricity generation by Renewable Energy Equipment, see http://www.fitariffs.co.uk/ a very considerable increase in the value of the energy generated is now operative Coupled with the "inflation proof" characteristic and the ability to apply depreciation values against taxable income makes for a most interesting financial situation. The diagram below shows cash flow, and has built in figures for inflation/energy price increases, but does not include depreciation.

For a small program to calculate the full financial effects see http://herehydro.weebly.com/data-files downloads.html first item susteng.xls which is downloadable. NOTE This was written in 1994 so should be checked for today's accounting and tax regulations.. An alternative is this program http://midsummerenergy.co.uk/grid-connect-solar/solar-feed-in-tariff-calculator.html ***



Solar feed-in tariff calculator *** Own Use

Based on the data used for the cash flow diagram the array will initially output around 96800 kWh per year. As panels degrade very slowly over time, after 25 years that will have dropped to around 81209 kWh each year.

The total cost of installing the system was £368000. As an asset, it would initially be worth approximately £217500, and would then gradually depreciate in value. The asset value column below gives an indication of how the system value may change over time.

The annual return column shows the percentage return each year on the initial investment. and the net profit/loss column shows the cumulative income from the system plus the current asset value of the system, minus the cost of installation. Initially this will be negative, but will at some point break even.

year	income / savings?	annual return?	asset value?	net profit / loss?	
1	£ 38042	10.3 %	£ 217500	£ -112458	
2	£ 38257	10.4 %	£ 210975	£ -80726	
3	£ 38490	10.5 %	£ 204646	£ -48565	
4	£ 38743	10.5 %	£ 198507	£ -15961	
5	£ 39017	10.6 %	£ 192552	£ 17101	Break even
6	£ 39311	10.7 %	£ 186775	£ 50635	
7	£ 39629	10.8 %	£181172	£ 84661	
8	£ 39968	10.9 %	£ 175737	£ 119194	
9	£ 40332	11 %	£ 170465	£ 154254	
10	£ 40722	11.1 %	£ 165351	£ 189862	
11	£ 41136	11.2 %	£ 160390	£ 226037	
12	£41578	11.3%	£ 155578	£ 262803	
13	£ 42047	11.4%	£ 150911	£ 300183	
14	£ 42547	11.6 %	£ 146384	£ 338203	
15	£ 43077	11.7 %	£ 141992	£ 376888	
16	£ 43637	11.9%	£ 137732	£ 416265	
17	£ 44231	12 %	£ 133600	£ 456364	
18	£ 44859	12.2 %	£ 129592	£ 497215	
19	£ 45522	12.4 %	£ 125704	£ 538849	
20	£ 46224	12.6 %	£ 121933	£ 581302	
21	£ 46962	12.8 %	£ 118275	£ 624606	
22	£ 47741	13%	£114727	£ 668799	
23	£ 48563	13.2 %	£ 111285	£ 713920	
24	£ 49427	13.4%	£ 107946	£ 760008	
25	£ 50337	13.7%	£ 104708	£ 807107	

One can see from the above the different situations between own use of the energy, usually the more profitable and export to the grid.