Solar Matters No. 8

Article by Bruce Sonogan, Benalla Sustainable Future Group.

Is now a good time to invest in solar?

More and more I am being asked, “Is solar PV worth the money?” The answer is “It depends!” It will depend on whether you can access the Premium Feed in Tariff of 60cents/kWhr (which will soon be changing for new installations), whether you can get the federal governments solar credits and lastly what you think is value for your invested dollar.

To try to answer this question fully I have been crunching some numbers. I have used prices for solar systems based on the current pricing structure for GV Community Energy’s Round 2 offer (www.gvce.com.au), and the electricity rates shown on a recent TXU statement. I have also assumed that 30% of the power produced is exported to the grid, which is a real figure from my own 1kW system over a 12-month period.

Using the above assumptions, I have calculated that the return on investment from a 1.5 kW system is 21.5% and, the larger the system and the more power available to be exported to the grid, the better the rate of return. This result is of course the best case scenario for the current situation, so what will happen if the Premium Feed in Tariff disappears? Well, using the same 1.5kW system, my calculation shows that the return on investment will drop to 12.7%, which to me is still attractive.

I also asked myself “What would be the return if there were no subsidies and the solar PV system had to stand-alone?” Well, using the full price of a 1.5kW solar PV system and current electricity rates, my calculations show a return on investment of 6.8%. If electricity rates were to double, as some are predicting, then the future return on today’s investment would rise to 13.3%.

So, is it worth the money? Well, if your investments are returning you more than the return on investment that I predict are possible with a solar PV system, then you will be better off leaving your money where it is. If on the other hand you are getting less, then solar power maybe worth considering. If you are teetering on a decision, then perhaps adding in the environmental benefits maybe enough to push you in the solar power direction.

***Solar Tip for August**. If you have an investment portfolio, consider investing in a solar PV system to add some diversity and to spread your investment risk.*

The table below provides data collected from six Benalla District solar electrical systems for the months of June and July. Please note that for July, the capacity of System B has been increased to 3kW. Hence the big jump in daily saving.

System	**A**		**B**		**C**		**D**		**E**		**F**	
Rated capacity	1 kW		1 kW/3 kW		1 kW		2 kW		4.2 kW		3 kW	
Household description	2 A, SHW, SP, EWP, R		2 A, 2 T, AC, SHW, SP, EWP, R		3 A, SHW, AC, U		2 A, U, AC		2 A, SHW, EWP, R		4A, SP, EWP, R	
Month	June	July	June	July	June	July	June	July	June	July	June	July
Grid power consumed	20.92	18.7	26.07	28.03	14.45	14.04	9.76	11.39	15.67	12.57	29.44	30.67
Solar power generated	1.57	1.51	2.42	5.8	2.1	2.03	3.03	3.97	10.8	9.67	6.5	7.06
Total daily household consumption	21.61	19.44	28.04	31.66	16.33	15.74	10.22	13.4	18.37	14.41	32.88	34.0
Daily cost without solar	$4.02	$3.54	$5.52	$5.84	$3.49	$3.41	$2.41	$2.96	$3.08	$2.52	$5.79	$5.71
Daily cost or return with solar	$3.36 cost	$2.93 cost	$4.88 cost	$3.84 cost	$3.00 cost	$2.88 cost	$0.78 cost	$1.40 cost	$2.30 return	$2.53 return	$3.30 cost	$2.83
Daily saving	$0.66	$0.60	$0.65	$2.00	$0.49	$0.52	$1.63	$1.56	$5.38	$5.05	$2.50	$2.88
Note 1: Each household will have different supply charges, however for simplicity and for direct comparison, the rates used for all calculations are as follows: Peak - 22.88 c/kWhr, Off Peak - 9.9c/kWhr, Premium feed in tariff - 0.60c/kWhr, Daily charge - 60.5 cents.												
Note 2: A = adults, T = teenagers, C = children, AC = air conditioning, SHW = solar hot water with electric boost, SP = swimming pool, EWP = electric water pumps, R = rural property, U = urban property												

Average Daily Solar Generation and Electrical Consumption for Selected Households in the Benalla District for the months of June and July 2011.

Disclaimer: Although every care has been taken in providing accurate information, no responsibility will be taken for the use of this information in making investment decisions.