



Solar Electric Rebate Poised To Drop

In this issue of Going Green we'll revisit the issue of solar electricity. Since it was last covered here, way back in December of 2008, the price of a solar electric panel has plummeted. This has, in turn, made the economics much more attractive because the panels are the most expensive part of a system. The bad news is the rebate is poised to drop from \$1.55 to \$1.10 per watt not long after this issue hits the news stands. This time around I'm expecting a record number of cancellations will be coming in from previous (rebate) reservation holders that didn't follow through within the 365 days allowed. My guess is that this will happen within a week or so, but it may take a little longer with cancellations.

Tempering this "bad news" drop of \$0.45 per watt in rebate, however, is the fact that the drop in panel prices has dropped the total installed cost by 25% to 35%! So what does this mean to the family interested in a solar electric investment? The table below gives examples assuming the cost of the system is financed with a home equity line for 15 years at a fixed rate of 7% interest.

Electricity Bill (\$/year)	Number of Solar Panels @ 210 watts	% Electricity Cost Covered	Economic Rate of Return	Years to Positive Net Cash Flow	Net Cost after Incentives (Rebate & Tax Credit)
\$1,200	17	76%	14.3%	5	\$12,703
\$1,200	22	95%	15.3%	3	\$14,845
\$2,400	24	78%	22.1%	0	\$15,489
\$2,400	33	98%	22.3%	0	\$19,324
\$3,600	28	75%	28.5%	0	\$16,836
\$3,600	42	98%	26.3%	0	\$23,976

The "Net Cost after Incentives" will vary from home to home, depending on whether it's a ground mount or a roof mount. A ground mounted solar array will usually cost more than a roof mounted one (the table costs are based on a roof mount). A roof mounted array on a two story home with a steep roof will usually cost more than one on a single story home with a low sloped roof. Likewise, the savings – as well as the rebate - will depend on the extent to which the solar panels are shaded. The

numbers in the table are based on a site with no shading. There are a variety of factors involved, so it's best to get a (free!) evaluation before assuming your specific case is represented in the table above.

In any event, the table shows that homeowners with the highest electricity bills still benefit the most with returns approaching 30%. The net average return from the stock market over the last 30 years has been about 7%. So in all the examples above, the rate of return provided by solar is far better than you could expect from the stock market, especially these days!

The "Years to Positive Net Cash Flow" column represents the number of years it takes for the annual savings (electricity savings + mortgage interest deduction) to exceed the annual costs (loan payments). In other words, the number of years it will take before you're sending the bank less than you used to send PG&E. Back in December of 2008 it took 10 to 11 years before hitting "positive net cash flow" with a \$1,200/yr electricity bill, but today it takes 3 to 5 years. In the case of a home with a \$2,400 per year (\$200/month average) electricity bill you'll reach a point where the savings exceed the costs within the first year of operation whereas last December it took 2 to 3 years.

As is usually the case, the weeks preceding this impending drop in the rebate are keeping solar companies like ours busy into the wee hours as folks rush to get a reservation before the drop. This coming week will be no different, although even after the drop the economics will still look far better than they did last December. I advise people not to get too excited and rush into it. Always get at least two or three bids before committing to a particular company. To find a list of solar companies in your area go here –

<http://www.gosolarcalifornia.ca.gov/retailers/search-new.php>

By the way, I just did a search on this link for solar electric installers within a 20 mile radius of Grass Valley and found 32 companies listed!

Ray Darby is President of Sustainable Energy Group Inc., a Grass Valley company offering energy efficiency and solar services for residential and commercial buildings, from comparing the alternatives through installation and servicing of energy systems of all types. You can reach him at 530-273-4422, via email RayDarby@SustainableEnergyGroup.com, or visit their web site at www.SustainableEnergyGroup.com.