

How to profit with a solar photovoltaic system

By Dean Konstantine



Many times when I ask people if they have ever considered a solar photovoltaic electric system, they look at me and say its too expensive, I can't afford it.

The reality is, you can't afford not to go solar! So why do I say that..... Lets set aside the environmental issue and purely examine the economic side of the equation.

It is important to take a close look at the solar incentive programs available by local, state and federal agencies. Since I live in California, I will only focus on the most common incentives from the state of California and the federal government. It would be important to look at your own communities or state programs to determine what is available for you directly.

Currently, here in California we have many local programs, but I will focus on the state rebate program which is based on a tier system. This system was created several years ago starting at tier 1, ending on tier 10 and is currently on tier 3. So what does that mean exactly? Well at tier 3 the state pays approximately \$2.20 per watt rebate directly to the system owner. As each tier is reached the amount of rebate will decrease. Therefore, the longer someone waits to jump in, the less cash is available to be paid towards a solar electric system. Consequently, there is an eliminate of time to consider, waiting too long to decide will drastically reduce the available incentive.

In addition to the state rebate program there is the federal tax credit program which allows for a 30% tax credit of the total cost of a system. This credit in most cases translates into another \$2.25 to \$2.40 per watt of savings. This year (2008) the 30% tax credit has a cap of \$2000 for residential customers, but beginning in 2009 the cap has been eliminated for everyone buying a system beginning January 1, 1009 .

So, what does this mean for a homeowner considering buying a standard photovoltaic system? Assuming a standard or average sales price of \$8 per watt, the homeowner or businessperson is effectively receiving approximately \$4.45

back in rebates and tax credits! That translates to a whopping 55% or more discount on a fully functioning system.

But, what about the cash which has to be paid to buy the system upfront, you ask? Okay fair question. Consider this, now that photovoltaic is coming of age we are beginning to see financial programs designed to meet this evolving niche market which is making owning a photovoltaic system very attractive.

For example, if a homeowner or business owner has reasonably good credit, a signature loan is available for up to \$100,000 for clean power purchases, secured loans for those with equity in their homes or business are also available. In addition, there are short and long term lease programs for both residential, commercial and government agencies just to name a few.

Knowing what we now know, lets look at why anyone would consider taking on debt to finance a photovoltaic system. Think about this, individual homeowners can cut there dependence on their favorite power utility company, they will avoid future rate increases, become energy independent and save real money. A business can reduce its overhead increasing its bottom line through tax advantages, credits, depreciation and decreased utility spending, do I really need to say more?

To illustrate my point, lets look at an average residential electric bill. Assuming our homeowner spends an average of \$300 for electricity per month, here is how it would break down.

In this example we have to make a couple of assumptions so this is purely for illustration purposes on the potential benefits of financing a system, figures subject to change.

Assuming our homeowner needs a 5200 watt system to zero out his current electric bill of \$300.

Sample System Finance Program:

System Size 5.2 kw (5200 watts) x \$8	\$41,600
State rebate tier 3 \$2.20	-\$11,440 cash rebate
Balance Financed	\$30,160 (zero down program OAC)
Clean Power Financing Interest	6.99% APR
Amortization 15 years	
Monthly Clean Power Payment	\$270
Savings over electric bill per month	\$30
Federal Tax Credit @ 30%	\$12,480
Assuming an annual tax refund of	\$2,496 From 30% tax credit
Tax refund applied to solar Financing	Accelerated payoff Program
Allows a 15 year loan paid off in 7 years	By applying annual tax refund towards loan
Interest saved on accelerated payoff	\$11,081
Electric Bill Savings over 7 years	\$2,520
Total Savings	\$13,601
Electricity cost starting year 8	\$0

By examining these numbers it is easy to see how, buying installing and operating a photovoltaic system is not only smart, it makes total financial sense. Leasing a

system for a shorter term, may increase the monthly expenditure for electricity but the payoff is sooner, allowing the system owner to realize the benefits of free electricity for many more years.

A business has greater flexibility to deduct lease payments, they can have a \$1.00 buyout option and depreciate the system over time for additional tax saving. It isn't necessary to be an economist to realize financing a photovoltaic system can be profitable without the need for investing a single penny from personal funds. No reason to liquidate investment, retirement or any other accounts to accomplish the goal of freeing yourself from the grip of the public utility company within a few years.

Remember, sun light is free, your just paying for the equipment to harvest it and once you pay it off, the sun will set you free!

Visit; <http://solarutilitiesnow.com> or call 760-961-2332