

# Solar Power

## *A Sound Financial Investment with Cash Benefits Day 1*

By Duane Deister

**Y**ou are excited about the benefits of solar power, but you've come to believe that it doesn't make economic sense to invest a huge sum of money in a solar system that will take 10 to 20 years to pay for itself. You want to cut your dependence on the electric utility and your ever increasing electric bills. But, as bad as our energy crisis gets, you can't imagine that your utility bills could ever amount to the \$30,000 cost for installing a solar system.

Don't let the high cost of the solar installation confuse your thinking. The reality is that installing a solar electric system will actually bring you financial gain immediately—from day 1. The key is designing the right solar system to meet your electric usage needs and using the equity in your home to generate a loan that will finance the portion of the installation not covered by California's generous rebates.

Let me give you an example. Let's say your electric utility bill, on average, is \$320 a month for using 1,350 kilowatt hours to power your household with 5 people. You are billed according to your usage: you receive lower tier 1 rates for baseline usage and higher rates for over baseline tiers 2 and 3 usages. To be cost effective, a solar system should be designed not around your total usage; rather, it should be designed around only the more expensive tiers of your usage beyond baseline. Typically, that would mean designing a 3.6 kilowatt hour system, costing about \$30,000 to install. With California's generous rebates, you will probably need to finance about \$24,000 through a home equity loan. With a 7.5% fixed rate, 30-year loan, your payments will be about \$167 a month. Your remaining utility bill for the baseline usage will be around \$105 a month. In total, your monthly operating costs will be about \$272, resulting in a savings of \$48 a month.

And, it just keeps getting better. Not only will you see greater cash flow from day one, every month you will also see your savings grow. This is because the utility company rates are not fixed; rather they fluctuate with supply and demand in the

market. Historically, utility rates have increased about 5% annually, and we can only surmise this will compound as the energy crisis in this country escalates and global warming puts a greater demand on our home heating and cooling systems.

With the right size solar system for your usage, you will cause your electric meter to spin backwards to the utility company from which you still fulfill baseline needs. That means, for the periods when your solar system generates more electricity than your usage demands, you will receive credit on your billing cycle for the energy you "have sold back."

It is important to remember that right-sizing a system is based on your electric consumption (usage), rather than the square footage of your home. Every household has unique electric energy needs arising from the number of residents and their energy habits as well as the features in the home requiring electricity. That is why it is best to design a system based on your electric usage (annual average usage taken from your electric utility bills) and other variables such as the solar access of your home (features of your property orientation and roof that will increase or inhibit the capture of solar rays). Two homes of the same size may have very different electric usage based on the residents and the property variables.

*Solar power  
is a sound  
financial  
investment  
with  
immediate  
cash benefits.*

# *Increased Property Value*

## More Secure Future

An investment in solar energy also increases the value of your home. Remarkably, this is a value-add that does not incur property reassessment for taxation as you typically experience when adding square footage or an installation such as a swimming pool. But, the real value-add is that solar power enables you to operate your home at a lower cost without having to sacrifice your electric usage.

If you plan to sell your house, lower operating costs will make your home more appealing. A house that costs \$2,000 a year to operate will be a lot more attractive to a potential buyer than a similar house that costs \$5,000 a year to operate. With a solar system, you will be able to increase your selling price. But even if the real estate market continues to be tight, you will have a competitive edge over homes that are not solar powered. The key is working with a realtor that is solar savvy and knows how to market the solar advantage.

As you can see, the message that solar power will not give you financial gain for 10 to 20 years is based on misinformation. And you can bet that electric utilities derive enormous benefits from perpetuating this thinking. I encourage you to look beneath the sticker price of the installation. When you consider the true economics, you will find that solar is a wise investment—now. We like to say that an investment at 7.5% results in a 21% rate of return.

*Right-sizing  
a system is  
based on  
your electric  
consumption  
(usage), rather  
than the square  
footage of  
your home.*

Solar systems enable you to tap into the unlimited power of the sun to power your home. In addition to your financial gain, you will also be investing in a secure power source. You will help move California and the nation toward independence from foreign energy sources and be contributing toward a stronger energy economy. On the environmental side, you will

be doing your part to reverse global warming and to create a healthier world for your family and community. Solar power is a wise investment in the world around you. On a personal level, it is a sound financial investment with immediate cash benefits.

© 2007 4th Day Energy

**Duane Deister** is the owner and operator of 4th Day Energy, a renewable energy company serving California's Central Valley. 4th Day Energy specializes in the design, installation and maintenance of custom solar systems for homes and businesses, right-sized for the owner's electric usage. For more information, visit [www.4thDayEnergy.com](http://www.4thDayEnergy.com), or call **877.484.3291**.



[www.4thDayEnergy.com](http://www.4thDayEnergy.com)