

## *Should you consider Solar Energy?*

*Is the technology mature enough?*

*Does it make financial sense?*

*Is it the right time to consider?*

*What will be your ROI?*

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***To find your answers to these questions and more, please read on...***

### ***Why should you consider Solar Energy?***

Despite the recent hype about solar energy technology in the US in last few years, this technology has been around for many years. Its applications in aerospace science and the military have proven to be quite viable and useful. Also, due to the high cost of energy in Japan and some European countries, solar energy technology has been utilized in commercial and residential buildings for over a decade. In fact, their visionary governments have had a long-term commitment in subsidizing solar/wind technologies and providing appropriate incentives to justify its cost.

There are many short-term and long-term benefits resulting from installing solar panels for homes and businesses. Solar energy is a terrific way to utilize the free energy Mother Nature offers and there are many positives outcomes by utilizing solar energy, both for personal advantage and also for the good of humanity. Solar energy will also help reduce consumption of traditional fossil fuels and will have a positive effect on the environment.

Many benefits come hand and hand with a switch to solar energy. First and foremost taking into consideration the current exasperated prices paid for fossil fuels, the money saved on monthly energy bills is an immediate benefit. On average the cost of utilities in the last 30 years have been increasing almost 7% per year and a projected increase of 10% yearly for coming years may not be too far off. By installing solar panels for residential homes and commercial businesses, consumers will cut their utility rates drastically and also truncate any further increase in prices for utilities, meaning more money can be saved. Because solar panels are highly durable products that require minimal maintenance and are backed by 25-year manufacture warranty, the long-term fiscal benefits are equally impressive.

### ***Is the technology mature enough?***

For those people that they may have some doubt about the maturity of this technology, it should be noted that solar energy technology has already made many technological advances and perhaps it is in its middle ages for residential and commercial applications.

Of course, like any other technology, it will definitely make more advances in the future. However, the price for the more advanced technology will also most likely make corresponding advances. The end product, however, is still the same old electricity, perhaps produced in a more efficient manner.

The efficiency of solar panel mostly matters when the area available for installation is limited. If one has enough space to install a right size solar system, then the efficiency factor becomes somewhat irrelevant, because what matters is the output electricity of the system. Therefore, the improvement in efficiency for future panels may not be as important for those who have enough space for today's technology. The decision of producing solar electricity with today's technology, as compare to waiting for more efficient panels in the future, may very well have a better return on the investment in the long run.

The durability's of today's panels are excellent such that most of the manufacturers guarantee their panels for 25 years! How many hi-tech products do we know with such a long warranty period? But drawing a comparison between the energy industry and the hi-tech consumer industry with respect to the economy of scale may not be a good apple-to-apple comparison. In the energy sector, due to consistently increasing demand and the inevitably ever-increasing cost of energy, the piece/watt ratio is also bounded to increase or at best stay constant for short period of time. At the end of the day, the output of a solar energy system will remain almost constant for a given installation for a long time (let's say 30 years), whereas the lifetime of most hi-tech products is less than 4 years.

A better comparison may be with the purchase of a car. In recent years a new mid-level car may cost about \$30-40K. After 10 years that car may practically be worth nothing. On the other hand, a \$40K investment in a solar energy system will produce energy and income from day one for 25 or 30 years.

### ***Does it make financial sense?***

To understand and be able to analyze the financial viability of a solar energy investment, we would need to understand the fundamental variables and their respective ranges and projections. We could begin with the cost of energy in the last 30 years; on the average electric energy utility costs have risen at the rate of 6.7%, and the projection for next 20-30 years of 10% or more may not be too far off.

The second variable is the price per watt of renewable in particular solar energy. For a typical system, the price for solar panels, inverters, and the cost of installation, has recently somewhat reduced due to economical situation.

The third variable would be the utility company's schedules and electric rates. Utility companies have created complicated rate schedules to sustain their profitability. As it was mentioned earlier, these rates inevitably will continue to increase in future. However, the key point worth noting is that once you have invested in a solar system, you have essentially become an energy provider, and as a result, you could also benefit from the rate increase imposed by the utility companies. That is, if they sell to the consumer at a

higher rate, you'll also float with that rate and sell your energy at a higher rate back to the utility company.

Taking into consideration these variables, the electric rates and schedules differ for residential, commercial, or agricultural sectors. Depending on the rates/schedules there is always a threshold dollar amount that determines whether a solar system make sense or not. If you are paying more than that threshold amount, then it makes perfect sense to invest in solar energy. This threshold can be determined using the available financial ROI calculators.

To think about the number of years for payoff of such an investment may not be a fair way of looking at a solar energy generating system. The reason is that if we only consider, for example, 6 years for the payoff of say a \$30K solar system, then we should not ignore the remaining 20 years or so of solid and continuous income from that investment. That amount certainly adds up to a big chunk of income, with a minimal cost of maintenance.

Another point is the appreciation factor for installing a solar system on a property. The installed solar system will certainly increase the value of your property as much as the original cost of the system, if not more.

### *Is it the right time to install solar system?*

The simple answer is that right now could be as good a time as any other. The evidence for this claim lies in the fact that as soon as you have invested and installed a solar system, you are practically an energy provider. You will produce electricity at the rate that the system was designed for, with a conservative projected rate increase of 10% or more per year! And such a system requires very minimal maintenance for the next 25 years!! Doesn't this sound like a better investment than some other investments we know of these days?

Of course, depending on your electrical consumption and your utility rate/schedule, you may or may not be a good candidate for a solar system investment. There are some software tools available that can help analyzing whether one is a good candidate and help one make the sound decision.

### *What will be your ROI?*

To find out the return on your investment for a solar energy system, one can utilize software tools provided on the websites of some the solar vendors and system integrator companies. These tools can provide initial and budgetary numbers for a solar system application, and provide clients with a trade-off or what-if analysis. One good example is the free [SBTI-ROI-Simulator](#) from SolarBreeze Technology, Inc., which is available on the website ([www.solarbt.com](http://www.solarbt.com)).

In conclusion, most candidates of solar energy systems have a unique situation, such as limited area, budget, timing, or electric consumption demand/habits, and it calls for thorough evaluation of their application. Solar system installation is a sizable investment

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and it is an involved addition to a given property, it cannot be treated lightly such as installation of appliances or fixtures. It has to be integrated into the property's electric system, and in most cases to the utility grid systems, and at the same time to be aesthetically appealing.

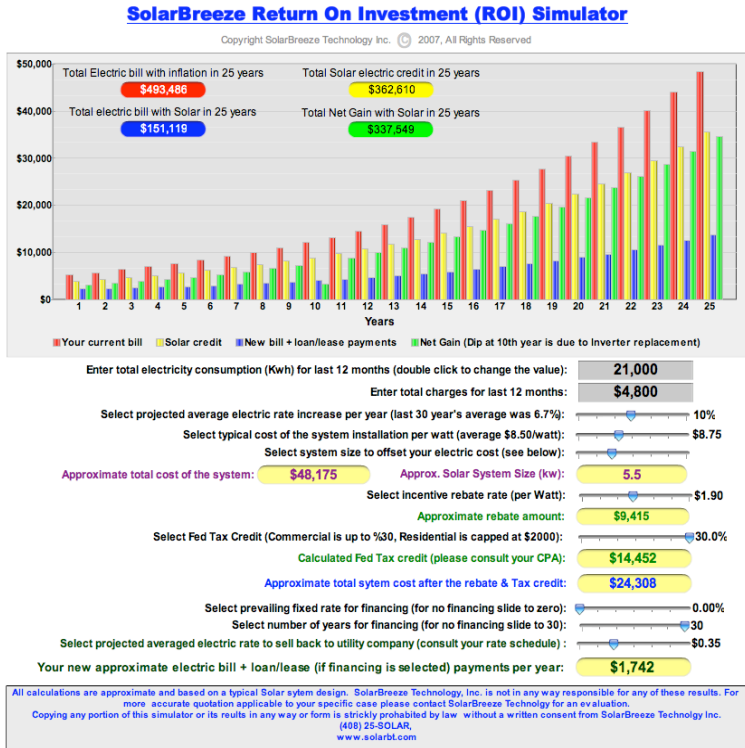
**For more info please visit [www.solarbt.com](http://www.solarbt.com)**

Materials for the ADD on the next page after the article:



*What is your total electric bill for the last 12 month?*

*What is your total electric consumption in (kwh) for the last 12 month?*



If you know the answer to these questions, you can utilize our easy-to-use, interactive **SBTI-ROI-Simulator** to find out how much it will cost you to install a right size system, and what would be the return on your investment.

Please visit our website or contact us for free evaluation and ROI analysis of your solar project.

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