

How to Have the Sun Pay Your Electric Bill **by Andy Kimes**

Do you pay an electric bill for common areas in your apartment building? There is a way to let the sun (and the State of California) pay that bill for you. Does this sound too good to be true? Read on.

This article explains how you can make money from photovoltaics, which is the science of turning the energy of sunlight directly into electricity. Photovoltaic or PV systems have no moving parts except for one: the electric meter wheel spinning backwards! Photovoltaic systems that feed electricity to the grid will actually make the wheel run backward, lowering your electric bill as it spins. You can think of it as your own little mini-power station. You will be selling power to yourself. In other words, you won't have to pay for electricity, if your system is sized correctly, and the sun keeps shining.

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Some people may think that a PV system is like a solar water heating system. Solar water heating systems use sunlight to heat water directly and there is no electricity involved. A PV system does not involve water. A PV system turns sunlight into electricity. When light (photons) strikes a photovoltaic cell, it creates positive and negative charges, and an electric current is generated. Solar cells or photovoltaic (PV) cells are made of silicon treated with some extra elements to make the cell more efficient. If enough of these PV cells are hooked up together, a significant amount of electric current can be generated, and either stored into batteries, or more likely for an apartment owner, hooked up to the existing electric lines.

PV for the Small Apartment Building

How can a PV system be cost effective for the small property owner? Collect your electric bills for the past year. These bills will tell you how much energy your common areas use over a period of time. A PV company can help you calculate, based on your electric usage, a solar cell system that will eliminate this bill.

In fact, a smaller property can be an easier installation. PV cells are usually mounted on a south facing roof, and a smaller system might be easier to install than a larger system. It is important that the system be in a location that is not shaded, so that it will receive maximum sunlight. One of the cleverest places for a PV installation is as the roof of a carport. If you have a parking lot, a simple carport structure (which tenants will appreciate) can support a roof of photovoltaic cells that can generate enough electricity to pay your common area electric bill. A little larger system can pay for security lights in the parking lot, too.

Rebates Available for Installation Costs

The major hurdle to installing a PV system is the initial installation cost. However, there are significant rebates from the State of California and the utility companies that are based on the amount of power your little mini-power station will generate. Both the federal and state governments encourage renewable sources of energy and are willing to pay part of the cost for you to install one, and give you a property tax break, too.

These rebates bring the cost of installing a PV system into the realm of a great long-term investment. Based on today's rates, interest rates as well as electric power rates, and factoring in available rebates and tax incentives, a typical PV system will pay for itself within about 10 years. The life of a PV system is at least 25 years, so for the last 15 years of the system, you can put that money in the bank. In typical PV systems, the rate of return on your investment over time can be in the 10 to 11% range. This is not a bad rate for a long term investment.

Have you owned your building long enough for it to have significant equity? If so, investing in a PV system and having your tenants pay for the system with their rents might be an excellent financial strategy as well as an energy efficient one.

And, there is another important factor working in your favor. Do you think that the rates you will pay in the future for electric power will go up or go down? That is a no-brainer question; we know they will increase in the future. The more the electric rates go up, the better rate of return you will get on your investment. When electric rates double or triple, sunlight will still be free!

A good solar company has the knowledge, skills and tools to carefully calculate and customize even small PV systems so that you, the owner, are assured a good future benefit to your bank account as well as to our island planet Earth.

For questions or more information, call Andy Kimes of Bay Solar Company at (510)386-4559.