



Architecture: How to utilize solar panels to reduce electricity expenses and energy

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Owners are looking to find ways to reduce their electricity expenses. One way to accomplish this is to limit the use of electrical consumption. Most of us find this difficult to do. One viable option to save money on electricity is to install solar panels in order to produce electricity. A solar panel is a device that converts light from the sun into usable electricity. The more intense the solar light is, the more energy they can produce.

There are many advantages to using solar power. For example, if you use your solar panels to power your electric based lighting system, you will experience a reduction in the recurring monthly electric expenses. Since solar power is virtually free, you can run your electric based lighting system with reduced costs. Many people like using solar power, because it is a "clean energy source" and not harmful to the environment. The government and utilities provide tax incentives and benefits to people who install solar panels and produce their own electricity!

There are many things to consider before you install solar panels:

Calculate your electrical needs

Check or estimate the power consumption required for all of the electrical equipment in your building that you would like to power. Most people use the energy generated from them to light there buildings since lighting consumes the majority of a building's electric use. Make a list of the power load you will need to power with the solar panels. Add up all those wattage amounts. That will give you an idea of the amount of electricity you are consuming monthly. This can also be simply achieved by reviewing your monthly electric bill. When selecting your panels, choose those with a slightly higher wattage rating than the amount you calculated from your list. This ensures that the ones you will be buying will have enough power output for your needs.

Consider the desired location for your panels

This will affect how much you spend on the purchase - such as what kind you will need or how many may be necessary for the desired location. This will affect the money you spend to buy them. You want them to have maximum light exposure throughout the day. Usually, between the hours of 9a.m. to 3p.m. is the best time. Installing them so that they are directly facing the sun is the best location and orientation - when the sun is at its brightest. The more intense the light coming from the sun is, the more energy they can produce

Look into the guaranteed service life

How long will they last? Most last for about 10 to 15 years. Many people are under the assumption that they last forever. That is simply not true! Check your expenses to see if buying your panels will give you savings over such a period of time (10-15 years). You determine this when you:

* Look at the estimated power consumption for the devices and appliances for each month. Then,

multiply that number by 12 to get the estimated cost per year.

* Now, multiply that number (the estimated cost per year) by the guaranteed service life of the panels to see what that potential savings would be and... whether or not the investment makes sense to you.

Consider add-ons

These can help ensure maximum light collection. A solar tracker is an example of this, but it is an additional expense. Also, because the solar tracker is powered by electricity generated from the solar panels, the output of your panels will be lessened by the solar tracker's power consumption. So, keep this in mind!

There are many forms of photovoltaic solar panels and deciding to spend a little more can gain an efficiency increase over less expensive panels. Thin film PV panels are the most cost effective but are also the lowest efficiency. Polycrystalline PV panels are greater efficiency but also higher cost. The most efficient PV panel per unit size is Monocrystalline panels which are made from a single ingot of crystal but have a very expensive manufacturing process making them the most expensive PV panels.

We can help you with your solar panel design, filing with the NYC Building Department and installation.

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