

NEW YORK STATE IS MAKING
SOLAR ELECTRIC ENERGY



FOR YOUR HOME
MORE AFFORDABLE

New York
Pub Energy Smart™
George E. Pataki, Governor

Solar
Power
...Naturally

Now, because of
exciting, proven technological advances,
photovoltaic power is a sensible and reliable way to provide
electricity for your home,
and thanks to New York State, **it's now more affordable.**



Imagine you could create your own electricity

What you're imagining is photovoltaic power – solar electric energy – and it's now a reality for New York State homeowners like you. Put simply, photovoltaic (or PV) is the power to convert sunlight directly into electricity. PV is a clean, inexhaustible, and non-polluting energy source that is dependable and easy to use.

NYSERDA – New York State Energy Research and Development Authority – is offering cash incentives for homeowners going solar. With these incentives, the cost of a typical photovoltaic system is cut nearly in half, so the cost to you is dramatically reduced. Visit www.PowerNaturally.org.



Power NaturallySM
NYSERDA

to power your home with electricity that is **clean, renewable, reliable**

Photovoltaic systems produce clean and renewable electricity for your home that doesn't deplete our finite fossil fuel resources, helps to cut down on our reliance on foreign energy sources, and reduces the need to build more power plants. In fact, your home becomes a natural power plant. It helps keep our air clean too, since there's no pollution. Because your costs are up front when purchasing and installing the system, you're also cushioning yourself against rate increases in the future and ensuring a reliable energy source for you and your family. You can even store solar power in batteries, so if there is ever an electrical outage, your power stays on.

The benefits of solar are significant and touch the environment as well as your pocketbook.

New York State offers tax credits against the purchase price. And with net metering, you can enter into a contract with your utility to sell electricity back to your utility. In fact, your electricity meter runs backward when your PV system is producing more electricity than you need, so you'll receive credit from your utility for the energy you don't use. It's no wonder solar is becoming so popular and is an energy source of choice for the future.



CHOOSING a PV system

There are several options to consider when choosing a PV system that's right for your home and your energy needs. A typical PV system is mounted onto your roof to take advantage of as much of the available sunlight as possible. Most residential systems require as little as 50 square feet for a starter system. A much larger unit could require as much as 1,000 square feet of roof space.

A good rule of thumb is that a one-foot-square PV module produces 10 watts of power in bright sunshine, so a 2,000-watt (two-kilowatt) system would need approximately 200 square feet. There are also new PV systems that actually integrate PV cells into roofing materials, so your shingles act as the energy collectors. It's a great idea if you're building a new home or replacing an old roof. Freestanding PV systems can be placed on the ground instead of, or in addition to, a roof system.

& affordable.

The cost of your system and your savings will depend on a number of factors, including the size of your unit, any trees or buildings that block out sunlight, and the weather. The Clean Power Estimator, a tool for evaluating PV system costs and benefits, will give you a good idea of system costs and savings, but your PV installer will be able to provide you with an estimate and make sure that your system is designed to provide the amount of energy you require. Check out the Clean Power Estimator at www.PowerNaturally.org.

Typically, smaller systems cost less up front but produce less energy. For example, a two-kilowatt system will offset the needs of a typical home, providing about 20% of that home's electric needs, while a five-kilowatt system may offset most of the energy needs of a very energy efficient home. Remember too that if you produce more energy than you can use – something particularly common in the summer – you can spin your electric meter backward and get a credit from your utility.

If you are thinking of a PV system, you might want to consider adding it when you refinance your home. The chart below shows why this can make sound financial sense. As you can see, if you were to refinance a 30-year, \$170,000 loan, going from a 7% interest rate to a 6% interest rate, you could roll the cost of a PV system into the refinancing package.

SAVINGS EXAMPLE for adding a PV System and refinancing

- Based on:**
- building 2.0 kW PV System
 - \$1,200/year electric bill
 - \$170,000 total loan
 - Refinancing-rolling in PV costs and reducing loan rate from 7% to 6% for 30 years

COSTS AND BENEFITS

Cost before incentives	\$16,000
Incentives	(\$9,450)
Net Cost	\$6,550
Annual utility bill savings	\$214
Decrease in loan payments after taxes	\$456/yr.
Annual Savings	\$658

It also makes sense to think of a PV system when you're building a new home. This is especially true if you build an ENERGY STAR® energy efficient home. For a small incremental investment, you'll see tremendous energy savings that continue to pay out for the lifetime of your home. Choosing ENERGY STAR and photovoltaic power is a winning combination.

MONTHLY SAVINGS AND COSTS*

	BEFORE PURCHASE (monthly)	AFTER PURCHASE (monthly)	NET PURCHASE (monthly)
Electric Bill	\$100	\$59	\$41 savings
Payment on \$7,369 loan*	\$0 month	\$17 for yrs. 1-5** \$44 for yrs. 5+	\$17 cost \$44 cost
Tax Savings (Loan Interest)	0	\$3 yrs. 1-5 \$11 yrs. 5+	\$3 savings \$11 savings
Total Cash Flow	(\$100)	(\$73) yrs. 1-5 (\$92) yrs. 5+	\$27 savings \$8 savings

THIS 2kW PV SYSTEM AND ENERGY-EFFICIENCY MEASURES WILL:

- Reduce energy consumption by 50% or 3,000 kWh
- Eliminate 8,974 lbs. of CO2 emissions in the first year
- Produce 2,315 kWh of electricity in the first year

*Cost of PV system and energy-efficiency measures after all available incentives

**New York Energy Smart reduced loan rate for years 1-5, and traditional 6% loan rate for years 6-30

No matter how small or large your system, you'll save substantially with NYSERDA's incentive program. Working with an eligible installer, you may be able to save between \$4 and \$5 per kilowatt for PV systems up to a maximum of 15 kilowatts. This helps reduce the cost of your system by about 50% and makes solar electricity an attractive investment. For example, you can incorporate a two-kilowatt solar power system on your home for about \$10,000 after the NYSERDA incentive. In addition, you can take a tax credit of 25% of the purchase price of your PV system, not to exceed \$3,750. Plus, the New York Energy SmartSM Loan Fund can help you finance the installation at rates reduced by 4% with participating banks. Visit www.PowerNaturally.org for additional information.

If you're building a new home, you can make the savings even greater when you participate in New York's ENERGY STAR® Labeled Homes program. These homes use 30% less energy than conventionally built homes by incorporating the best construction practices and energy-saving measures into your home. Combining energy efficiency and solar electricity is a smart choice when you are building a new home. ENERGY STAR labeled homes are eligible for an incentive level that is \$500 per kilowatt higher than that of a home built to code (\$4.50 versus \$4.00 per watt).

If you're interested in a PV system for your home, then the first step is to get in touch with NYSERDA.

We can provide you with more detailed information, including a list of PV installers in your area who are participating in the NYSERDA incentive program. You may want to speak with several installers and consider getting bids so you can compare costs and services. These participating installers will provide you with an estimate of how much energy your system will produce, plus a minimum five-year warranty covering full costs, including labor, and repair or replacement of defective components or systems.

Making the change to solar is easy, and you can get started with a phone call or a visit to our website.

For more information, just contact us at **1-866-697-3732**
or visit us at **www.PowerNaturally.org**.

Solar power makes sense for so many reasons.
It's right for the environment, and now is the right
time to take advantage of extraordinary savings.

