



462 Solar Way Drive, Hyde Park, Vermont 05655 (802) 888-7194

## Net Metered PV Estimate 5.55kW Roof Top

\$ 6.46\* per watt installed cost (before incentives and tax credits) for a standard roof top grid tied net-metered PV system of 5.55kW (5,550 Watts) in size. The net system cost will be reduced by approximately 40% when income tax credits and state incentive money is factored. At a good PV solar site (facing true south at a tilt angle of between 30 to 45 degrees with no shade falling on the array between the hours of 9:00 AM to 4:00 PM) this 5.55kW PV system will produce approximately 5,640 kWh per year on average (470kWh/month average). This electricity will be used in your home, or business. Any excess power that your PV array produces will spin your meter backwards and be used by your local utility. Your utility bill is reduced by the amount of excess electricity that your PV system produces.

In this example the 5.55kW net-metered roof top PV system will cost \$35,900 installed. With the State of Vermont incentive rebate of \$ 0.75 per rated DC Watt as of Jan 2011 will give this 5,550 Watt system an incentive of \$ 4,163. The system owner may also be eligible for a federal Investment Tax Credit of \$ 10,770 (30% of system cost). You will have to pay income tax on the state incentive, so add back, about \$ 1,166 for a net total cost of **\$ 22,133 (\$ 3.98 per watt of PV installed).**

This system is comprised of thirty (30) Schuco (highest quality German engineered monocrystalline PV modules) and will take up will be about 433 square feet in space. Three rows of (10) modules would be 27.5' east to west and 15.75' up the roof. Two rows of (15) would be 41' by 10.5'. This system estimate is for a standard roof top system. Ground mounted systems cost more due to excavation, wiring/conduit and structural mounting costs.

*\*Price per Watt varies depending on make and model of PV panels that are best for your installation, on the length of conduit & wire needed as well as the connection requirements of your building.*

*Our PV installations meet, or exceed, National Electric Code standards for safety and fire prevention.*

## **Environmental & Economic Benefits of Adding Net-Metered PV to Your Home, or Business.**

You can't buy a cheaper source of clean electric power generation than photovoltaic power. Combined with a significant use of energy efficiency measures in your home, you can now offset a high percentage of your electric bill with electricity produced by PV panels installed on your roof, or in your back yard. With retail electric utility rates expected to double within the next ten years, the investment of purchasing your own PV system certainly looks like a wise hedge against escalating price hikes. PV systems typically last from 25 to 35 years (or longer). With these rising electric rates the payback time in dollars is continuing to come down every year. However, any cost benefit analysis has to take into account the immediate environmental payback that begins to take place as soon as your PV system is in place. Consider the following numbers. Each kilowatt of installed PV capacity offsets the following pollutants annually in San Diego, CA. De-rate these numbers by 30% for Vermont: - up to one pound of oxides of nitrogen . - .04 pounds of sulfur dioxide. - and 1,924 pounds of CO2 (carbon dioxide). Source: [www.epa.gov/cleanenergy/egrid](http://www.epa.gov/cleanenergy/egrid). The energy payback time of a typical PV module is now only 1.4 yrs for sunbelt installations and is 2.5 years in less sunny areas. Energy payback is the amount of time that it takes the PV module to produce more energy than it took to manufacture ,and deliver, the module. Source: [www.nrel.gov/ncpv/energy-payback.html](http://www.nrel.gov/ncpv/energy-payback.html)

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