

Solar and Wind Home Electric Systems – affordable at last!

By Don Hoffman



The White Mountain Conservation League is always pleased to support sustainable lifestyles and renewable/low emission energy sources. Thanks to our local Navopache Electric Cooperative (NEC) and generous federal and state tax credits, going green is more affordable than ever!

Utility companies in Arizona are required to produce an increasing amount of their total capacity from renewal energy sources. The utilities could opt to construct and operate their own solar, wind or geothermal plants; or they could purchase energy from other renewable energy producers; or better yet, they could provide generous incentives for residents within their service area to install their own solar, wind or other renewable energy systems. NEC has opted for the latter, and as a result, production of renewable energy by homeowners has never been more affordable.

Here is how it works!

If you install a residential renewable energy system such as a solar, wind, or other qualifying system, then NEC will reimburse you for up to 50% of the installed cost of the system. You simply sign over the energy credits to NEC and agree to keep your system functioning for at least ten years.

You may also be eligible to receive generous federal and state tax credits that will further reduce your installation costs. With the goal of stimulating a greener economy, the American Recovery and Reinvestment Act of 2009 established a tax credit of 30% of the full cost of renewable energy systems installed after 2008. Two Conservation League members have recently installed solar electric systems with a final cost to them of less than 20% of the total installation - this after their nearly immediate NEC incentive payment and the tax credits realized when submitting their tax return the following year.

White Mountain Conservation League P.O. Box 595 Pinetop, AZ 85935

<http://azwmcl.org>



Grid-tie and off- grid systems qualify

For systems that tie into the power grid, conveniently called “grid-tie” systems, you would receive an incentive payment from NEC of up to 50% of the total installation cost with a maximum reimbursement of \$25,000. Your residence would remain connected to the NEC power lines. When you require more power than your renewable energy system can produce then you can draw from the grid. When your system is producing more electricity than you are drawing then your excess is transferred into the grid. A special service hook-up keeps track of the net flow of energy.

In the past, owners of grid-tie systems were disadvantaged by paying the retail rate for electricity drawn from the grid while only receiving a wholesale rate for excess electricity added to the grid. However, the Net Metering Tariff recently approved by the Arizona Corporation Commission establishes equal exchange rates, making gridtie systems even more affordable.

Grid-tie systems allow you to size a system to meet your average energy use rather than your peak energy use. Grid-tie systems continuously ensure an adequate supply of electricity, even when your home system is not producing energy, such as during nighttime for solar systems or periods of calm air for wind systems. You can even size your system up to 125% of your average annual electricity use so that you could receive net revenue from NEC rather than a bill - the more energy you conserve the bigger the check!

Remarkably, NEC also provides incentives payments for off-grid systems, though at a lesser rate per kilowatt hour produced. Such systems generally require a battery bank that can store energy for your peak use as well as for when the system is not producing. So, with the combination of currently available NEC incentives and tax credits, it is a great time to consider off-grid electric systems as well.

Financial considerations

As an example, a completed system might represent a final personal investment of \$7000, but the up front cost could be \$35,000. It is possible for your final investment to pay for itself in reduced or eliminated electricity bills within the first 5-10 years. That’s an average annual return of greater than 10% of your personal investment while also enhancing the value of your home.

An obvious deterrent to taking advantage of the generous incentives is that you may need pay for the complete installation before any incentive payments or credits are realized. A home improvement loan may help to cover the up-front costs, and then you can pay down the loan when the incentive payment and tax credits kick in. Also, your licensed installer may finance a

White Mountain Conservation League P.O. Box 595 Pinetop, AZ 85935

<http://azwmcl.org>



portion of the installation until you receive the NEC incentive payment, approximately 30 days after final inspection and activation of the system.

The White Mountain Conservation League believes that if your location and circumstances are supportive, the time has never been better to consider installing a renewable energy system. It is very important to research the various incentives carefully before you get started. In order to qualify for NEC incentives, all renewable energy systems must be completed and certified by a licensed electrician and then approved by NEC personnel.

Learn more about current incentives

You can learn more about the NEC renewable energy incentives by contacting NEC at 928-368-5118; or visit: www.navopache.org - click on "member services" and then "renewable energy". For information regarding federal tax incentives visit: www.dsireusa.org – click on "federal Incentives" and then "residential renewable energy tax credit" Finally, it is recommended that you check with a tax professional regarding your eligibility for federal and state tax credits.

Learn more about WMCL

The White Mountain Conservation League (WMCL) is a local non-profit group dedicated to sustaining and enhancing the White Mountain ecosystems and communities. The WMCL embraces and encourages stewardship of all components of the region's diverse ecosystems and recognizes their value to our regional economic vitality and quality of life. In addition to supporting sustainable living, the WMCL actively participates in all decision processes that involve environmental issues important to our membership and community. Membership is free. Learn more at: www.azwmcl.org

Don is a Board Director of the WMCL and is a longtime resident of the Alpine area.

White Mountain Conservation League P.O. Box 595 Pinetop, AZ 85935

<http://azwmcl.org>

