

## #53 Solar Electric Power for the Small Business

The renewable energy industry is not only growing very rapidly but changing direction very quickly. A year ago, solar electric or photo voltaic systems were priced out of reach as world demand far outstripped manufacturing supply and foreign demand captured so much of world supply that US residents paid a very high premium. For a variety of reasons, the situation has changed. Because of a failure in Albany to pass net metering legislation that would raise net metering caps to at least 2 million watts, large systems for schools and other large buildings for the time being just don't work financially. But for small businesses, solar electric systems are once again becoming affordable and, equally important, there is product and installation service available to our area.

With the tremendous momentum of local interest in gas drilling it would be a very positive development if many would consider the renewable energy opportunities. Solar electric is the here right now to assist in lowering the toxic impact of current energy use. The best science in the world says that gas and other fossil fuels made from it are shortening the time we have to arrange for a new relationship with the environment which is increasingly unable to tolerate our assault on its life support systems.

Here is a brief description of current solar electric systems opportunities. For the sake of brevity, let's look at a 10 kw and a 25kw system. Both of these systems are larger than most homes can use, but they fit many farms, stores and other small businesses. ( In column #6, available at SASOnline.org you can find typical home system pricing.)

A 10 kw system is available at a project cost of \$86,000. A NYSERDA grant will cut the bill in half to \$43,000. For a very short period, maybe 45 days, the USDA will pay 25% or \$22,500, leaving the cost to owner at \$21,500. Investment Tax Credits of 30% on the remaining balance (\$6450) leaves a net cost of \$15,050. The system will save at least \$2000 in electric costs per year for a simple pay back period of seven years. The system is warranted for 25 years and many panels are 95% efficient at 40 years. No pollution, no increase in the cost of this electricity, decades of free electricity, and savings of many tons of green house gases every year. Loans are locally available that pay the first 4% of interest. This system will pay for itself over and over again.

A 25kw systems is available at a project cost of \$200,000. A NYSERDA grant of 50% brings the cost to \$100,000. A USDA grant of 25% brings the cost to \$50,000 and an Investment Tax Credit of \$15,000, (30% of \$50,000) makes the system available for \$35,000. With a buy down of 4% on the interest, a loan can be arranged at very affordable rates and the \$5000 annual savings in energy costs used to pay the loan.

Of course, everyone should do an energy audit which will provide additional savings of electricity, pollution and finances. Many energy conservation measures are no or very low cost with pay back periods of less than a year to 2 years. You don't get that with your car. And it's time to conclude that renewable energy is as necessary right now as your car. Your car gets you places. But there is no place to go in the future without everyone joining the green industrial revolution of drastically cutting back in fossil fuel use.

I know a lot of people like wind. I do too. But small wind projects must wait for different market conditions to happen. For example, NYSERDA is swamped at the moment with almost 400 solar electric applications and almost no small wind

applications. The most frequently cited reason for the lack of small wind projects is local zoning laws that make the costs of permitting too high. We must work to change that.