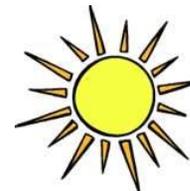




2014

## **Free Solar Power!!** **(Just Add: 1 Very Affordable Solar System)**



**Solar is Not Just “the Right Thing to do” but is also Very Cost Effective!**

Today there is a “perfect storm” of solar electric systems costing 50% *less* than they did just 5 years ago combined with substantial financial incentives. A solar system will reduce or eliminate your energy utility bills and add resale value to your home. There are some excellent low interest, longer term financing options available that can make your monthly loan payments about or even lower than the reduction to your monthly electric, natural gas or propane expenses – meaning that a solar system can be “cash neutral” or even “cash positive” from the moment it is installed. Many solar system owners receive monthly checks *from* their electric utility! Unlike coal or natural gas-derived electric generation, the “fuel” used by a solar system, the Sun, is free and will remain free. Guaranteed!!

### **Two Types of Solar Systems**

- A solar photovoltaic (“PV”) electric system uses panels placed on your roof or ground-mounted to convert the sun’s *light* (not heat) into electricity. Energy you don’t use is credited to you as it passes through your utility meter and out onto the utility grid. In addition to your meter spinning “backwards” (called “net metering”) PNM will currently pay you an additional 4 cents per kilowatt-hour (kWh) of solar electricity produced. But that incentive is decreasing over time.
- A solar thermal system generally uses roof mounted collectors for water heating or space heating (adaptable to radiant floor, baseboard and forced-air systems) → saving natural gas, propane or electricity depending on your current heating source.

**Choosing the size of a solar PV system** depends on what percent of your electricity use you want to generate from solar and/or your ability or desire to pay for the system outright or finance it via a loan. A 2 kilowatt (kW) photovoltaic system can generate about 270-300 kilowatt-hours of electricity during an average month, enough to completely meet the power requirements of a smaller home.

For a **solar thermal water heating system**, one 4’X10’ collector can satisfy 75-85% of a typical home’s hot water needs. Solar space heating requirements are specific to each home. If you’re using electricity or propane (both being much more expensive than natural gas) for water or space heating, solar thermal systems can be particularly attractive.

### **Costs**

As with most home improvements, it’s best to obtain bids from three different contractors. Note that both solar PV and solar thermal systems can take advantage of 30% federal and 10% state income tax credits and are also exempt from paying the state’s 8+% gross receipts “sales” tax. Many PV solar companies also offer 10 year “worry free” warranties covering the entire solar system.

- A solar PV system costs (installed) generally around \$5000 to \$6000 per kilowatt of capacity – 2 kW system will cost roughly \$10,000-12,000. The after-tax-credit net cost of a \$10,000 system is just \$6,000.
- A typical solar water heating system for a family of four costs from \$7,000 to \$10,000 including installation. The after tax credit net cost is \$4,200-6,000.

## Financing My Solar System

Some solar PV companies offer a one year interest free loan for the amount of the anticipated income tax credits. Using a 2 kW, \$10,000 PV system example, such a loan would cover the \$4000 of anticipated tax credits. You never make monthly payments on this loan; you just pay it off once you receive your refunds. Also, Homewise (983-9473, [www.Homewise.org](http://www.Homewise.org)), a non-profit lending organization offers 4% loans to City of Santa Fe residents, for up to 30 years for homeowners that have a gross annual income of less than \$104,000 per year. Citizens in the unincorporated areas of Santa Fe County can obtain a 6% loan. If you don't qualify for a Homewise loan, consider an FHA-backed "PowerSaver Loan" with terms as long as 20 years. If you're refinancing your existing mortgage or buying an existing home (not a new home), consider a HUD/FHA "203K" mortgage that allows you to make a variety of home improvements (re-roofing, kitchen and bath remodels, solar systems) and roll the costs into the 30 year mortgage.

**PV System Financing Examples** (\$10,000 gross cost, 2 kW PV system, approximately \$45/month reduction to your utility bill) Note: Similar savings can be realized for a solar hot water system.

- 1) \$4000 anticipated tax credit amount covered by a 1 year, interest free loan offer from solar company (no payments), \$6000 financed at 6.5% for 20 years using a "Power Saver" loan or a loan available from many of the solar companies. Monthly loan payment: \$45. **With a \$45 monthly utility bill reduction, your solar system ends up costing you nothing!**
- 2) \$10,000 loan from Homewise:
  - City Residents: 4%, 30 year loan = \$48/month payments. \$3/month net cost.
  - County Residents: 6%, 30 year loan= \$60/month payments. \$15/month additional cost.

However, you have a \$4000 income tax refund coming to you in the next year!! You can use that \$4000 to take a great vacation, or, if you would like, Homewise will apply your \$4000 tax refund to your loan (at no cost) to reduce your loan payments. The City resident 4% loan payment would drop to \$29/month (for a \$16/month net cash benefit!) and the County resident 6% loan drops to \$36/month (\$9/month net benefit.)

**Remember: Since your monthly loan payments are fixed, your net monthly financial benefit increases as electric, natural gas and/or propane costs increase over time.**

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