

Solarize Santa Fe!



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



“I’ve wanted solar power at my home for quite some time but thought it was still too expensive for my budget.” Not true!

“Solarize Santa Fe!” is a 2016 Santa Fe County campaign to educate the public about how incredibly cost-effective solar power has become. The County offers free solar advice to home and business owners throughout the County – including inside the cities of Santa Fe, Española and Edgewood.

Today there is a “perfect storm” of solar electric systems costing 60% less than they did just 5 years ago combined with substantial financial incentives. A solar system will reduce or nearly eliminate your energy utility bills and add significant resale value to your home or business. 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 close to “cash neutral” or even “cash positive” from the moment it is installed. Unlike coal or natural gas-derived electric generation, the “fuel” used by a solar system, the Sun, is free and will remain free (i.e. you’re immune from future utility rate increases.) Guaranteed!!

Two Types of Solar Systems

- A solar photovoltaic (“PV”) electric system uses panels placed on your roof, ground-mounted, or as a “solar carport” to convert the sun’s *light* (not heat) into electricity. Solar-generated electricity you don’t use is credited to you as it passes through your utility meter and out onto the utility grid. New Mexico has “net metering” meaning that your electric utility pays you for your solar power at the same rate as they charge you for electricity.
- 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.

Determining the size of a solar PV system depends on what percent of your electricity use you want to generate from solar. When sizing their solar system, most homeowners choose to be on 100% solar. A 3 kilowatt (kW) photovoltaic system can generate about 450 kilowatt-hours of electricity during an average month, enough to completely meet the power requirements of an average-size home. Obtain a 12 month usage history from your utility to determine your annual electric usage. Add up the number of kilowatt-hours (kWh) you used each month over the one year period. Divide that amount by 1800 to get the size of the PV system (in kilowatts) you’ll need to have all of your electric usage generated by your solar system. For instance, if your total usage over 12 months was 5400 kWh, you’d need a 3 kW sized PV system (5400 kWh/year ÷ 1800 kWh/kW/year = 3 kW).

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 companies. Note that **both solar PV and solar thermal systems can take advantage of the 30% federal income tax credit and are also exempt from paying the state's 8+% sales tax.** The federal income tax credit is not a Schedule A "deduction" to your taxable income but a full dollar-for-dollar reduction to the taxes you have to pay. The 10% state income tax credit expired this year. Most PV companies offer 10 year or even longer "worry free" warranties.

- A solar PV system costs (installed) generally around \$3500 to \$4500 per kilowatt of capacity – most 3 kW systems will cost about \$10,500-13,500. The after-tax-credit net cost of a \$12,000 system is just \$8,400. Ground-mounted and carport systems are generally somewhat more expensive than roof-mounted systems.
- 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 \$4,900-7,000.

Financing Your Solar System

Some solar PV companies offer a one year interest-free and payment-free loan for the amount of the anticipated income tax credits. Using a 3 kW, \$12,000 PV roof-mounted system example, such a loan would cover the \$3,600 of anticipated federal tax credit. You never make monthly payments on this loan; you just pay it off once you receive your tax refunds. Also, Homewise (983-9473, www.Homewise.org), a non-profit lending organization, offers 6% loans to Santa Fe County residents (including inside the City), for up to 30 years, for homeowners that have a gross annual income of less than \$104,000 per year. Interest expense on Homewise loans can be "Schedule A" deducted from your income taxes! If you don't qualify for a Homewise loan, check with your existing lender, a local credit union, or a solar installation company.

PV System Financing Examples (\$12,000 gross cost, 3 kW PV system, approximately \$54/month reduction to a PNM utility bill) Note: Similar savings can be realized for a solar hot water system.

- 1) \$3600 anticipated tax credit amount covered by a 1 year, interest free loan offer from solar company (no payments), remaining \$8,400 financed at 6.0% for 20 years using a loan available from many of the solar companies. Monthly loan payment: \$60. **With a \$54 monthly utility bill reduction, your net cost is just \$6 per month!**
- 2) \$12,000, 6%, 30 year loan from Homewise: Monthly loan payment: \$72. \$18/month net additional cost. However, you'll receive a \$3600 income tax refund coming to you in the next year!! You can apply your \$3600 tax refund to your loan (at no cost) to reduce your loan payments. The monthly loan payment would drop to about \$50/month (\$4/month net benefit).

Your net monthly financial benefit automatically increases as utility rates increase over time. In short, you won't be affected by future utility rate increases. Also, keep in mind that solar increases the resale value of your home!



For Free Advice: Call Craig O'Hare, the County's "Solar Guy" at (505) 992-3044. cohare@santafecountynm.gov www.santafecountynm.gov click on "Solar Power" under "Services" for a list of solar companies doing business in the County.

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