

Getting Solar: 5 Things Buyers Should Know About Financing a Solar Energy System

Solar PV panels are expensive. And even their less-expensive cousin—solar hot water systems—typically require at least several thousands dollars of upfront investment. While federal and state incentive programs can significantly reduce these costs, you'll still need to find a way to foot the rest of the tab. Here are 5 ways to bankroll your transition to clean power:

(1) Low-interest loans

In addition to rebates and tax credits, many state governments provide low-interest loans for individuals and businesses that install solar energy systems. Interest rates and terms vary by state—as do availability and eligibility requirements—but in most cases these types of programs enable you to borrow at a good rate when installing a solar energy system. You may be better off, however, by financing through an Energy Efficient Mortgage (EEM), discussed below. Because the interest on mortgage payments are tax deductible, EEMs often save borrowers more money over the long term relative to traditional or state-sponsored loan programs. The **Database for Renewables & Efficiency** maintains a comprehensive list of federal and state loan programs.

(2) Energy Efficient Mortgages

Energy Efficient Mortgages—or EEMs—provide a helpful financing option by enabling you to bundle the solar purchase into your mortgage. In practice, EEMs use the energy savings from solar—along with savings from any energy efficiency improvements—to increase homeowners' buying power. As outlined by the Energy Star website, “[a]n EEM is a mortgage that credits a home’s energy efficiency in the mortgage itself. EEMs give borrowers the opportunity to finance cost-effective, energy-saving measures as part of a single mortgage ... thereby allowing borrowers to qualify for a larger loan amount and a better, more energy-efficient home.” EEMs may be incorporated when buying, selling, refinancing or remodeling your home.

As noted, interest payments on mortgages are tax deductible. Solar financing expert Andy Black explains why this is an important distinction: “[i]n the case of ‘deductible’ loans, such as home-equity based loans, the interest is usually tax-deductible and thus the loan effectively costs less. Home equity loans are also excellent sources of funds because interest rates on real-estate secured loans are relatively low and payment terms can be long.”¹

The U.S. federal government insures these loans through the Federal Housing Authority (FHA) or Veterans Affairs (VA) program. For more information on EEMs and HERS ratings, visit the **Residential Energy Services Network**, or check us out at **GetSolar.com**.

¹ Andy Black, “What’s the Payback?” *Solar Today*, May/June 2006, p36.

Professional Associations



(3) Power Purchase Agreements

Power Purchase Agreements, or PPAs, provide a clever financing solution. In simple terms, such agreements let businesses—and, increasingly, homeowners—reap the benefits of solar power without having to either (1) pay upfront costs, or (2) take out a loan. Here's how it works: As opposed to leasing, where you pay a third-party financier over time in order to gain ownership of the PV system, in PPAs the ownership remains with the financier. The owner of the building where the solar is installed (you) pays the financier a fixed monthly rate for electricity generated by the solar panels. You benefit by having predictable, stable energy costs for the contracted term. The financier benefits by receiving the helpful tax credits associated with owning a solar PV system—with no major upfront costs. Until recently, PPAs were used almost exclusively for commercial-sized systems. A number of outfits have since entered the California market to provide a PPA solution for homeowners. While certainly hassle-free—and, in many cases, cost-effective—PPAs are available only in limited areas and, depending on your energy goals, may not be the best choice.

(4) Leasing

Here's a quick example of how leasing works with solar power: The lessee (you) pays some money down, typically around \$2,000, and agrees to a 10-year contract. The company installs PV panels on your roof and agrees to pay for any maintenance, as needed, including the eventual replacement of the inverter. You pay them a monthly rate. If it works correctly, everyone wins: the company makes a profit, while you pay a monthly fee that's lower than what you'd been paying to your utility before the panels were installed. If the house is sold, you can either transfer the lease to the buyer (provided they have good credit) or buy the system outright and add it to your asking price. Drawbacks? You won't benefit from any of the available solar incentives, like the 30-percent federal tax credit. (Note that most solar lease providers have minimum credit score eligibility requirements.)

(5) Collective bargaining

Like in any other market, there's strength in numbers when it comes to purchasing solar. If Sue is going to buy 500 PV panels, and Jim is only going to buy 22, Sue will invariably get a better per-panel price. Collective bargaining for residential solar systems—dubbed "solar community purchasing"—has recently become popular in California, where there's a high density of individuals interested in buying. While such arrangements yield benefits to consumers, they don't come without their drawbacks, as GetSolar's Margaret Collins explains: "A good [solar] deal doesn't make everyone happy. Unfortunately, a side effect of group purchases of this kind is that it makes it very difficult for the competition. It is not feasible for most installers to simply drop their installation price by 15-20%: their profit margins are nowhere near big enough to allow for that."

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