

Financing The Future

Paying For Your Renewable-Energy Installation

Renewable-energy technology is advancing at a rapid clip. What's not widely known is that financing options for those who wish to own/operate solar, wind and other energy-generating equipment are evolving just as quickly.

Energy systems are becoming less expensive. Third-party financiers are becoming more common. Further, the American Recovery and Reinvestment Act—which people in early 2009 were calling the “stimulus package”—adds more government incentives to the pot.

Making sense of your financial choices takes some homework though, and likely more than a few phone calls, including at least one to your accountant. Options vary from state to state, and even between utilities within states. What's required now is *an investment of time* to understand your choices.

Such a savvy investment could end up repaying you for years, in the form of reduced energy expenses. There's an additional payback, of course: You'll be contributing to the goal of reduced greenhouse gas production and foreign energy dependence.

In this brief overview, we'll examine select financing opportunities available to building owners who are considering a renewable-energy installation on their property. It is by no means a definitive list! You may well, however, find resources that you've not previously considered. It's provided in the hope that it will “stimulate” your thinking.

Cashing in

For those building owners who can afford it, paying up front for a renewable-energy resource offers a number of advantages. The biggest, of course, is that you can start enjoying the savings on your utility bills right away.

Other financing options may divert to your financing partner the benefit of selling excess electricity back to the local utility. That finance-providing entity also may be the beneficiary of any tax credits, refunds or other incentives.

Of course, you'll need a healthy balance sheet to invest in a renewable-energy system. It's not unusual for equipment and installation for photovoltaic or small wind systems to run \$30,000 or more, even with tax credits and rebates.



And: While your electricity meter may start spinning backward immediately, it could take a number of years to recoup that investment based on energy savings alone.

Accelerated depreciation

New renewable-energy equipment, including solar electric and thermal technologies, small wind turbine installations, combined heat and power equipment, fuel cells and microturbines, may be eligible for accelerated depreciation deductions.

Owners of qualifying equipment placed into service in 2008 or 2009 can deduct 50% of the equipment's adjusted basis during the appropriate tax year. The remaining 50% is depreciated following the ordinary schedule. Any energy credits received by the owner as a result of the installation must be taken into account when determining the adjusted basis.

Investigating Incentives

Good financing terms can be very helpful in getting your renewable-energy projects installed, but rebates and tax credits are even better. Enthusiasm for these technologies is leading governments at all levels (federal, state, and even municipal) to offer attractive incentive plans.

Determining what options are available in your state or city can be a bit confusing. The online Database of State Incentives for Renewables & Efficiency (www.dsireusa.org) is a good resource for determining the state and local incentives for which your business and property might qualify. The database is updated regularly and provides contact information for the programs it lists.

Leading the pack is a series of provisions included in The American Recovery and Reinvestment Act of 2009, otherwise known as the stimulus package. This legislation provides \$43 billion for a range of renewable-energy incentives. One of the most significant is a new renewable-energy grant program. Instead of an investment tax credit for renewable-energy installations (which had been in place), the law now offers a direct cash grant, to be administered by the U.S. Treasury Department.

Note: Eligible projects must begin construction by December 31, 2010 and be placed into service by January 1, 2017.

Additional incentives include the removal of the previous \$2,000 cap on previous investment tax credit provisions. Projects can receive a tax credit or grant for up to the full 30% of a renewable-energy installation's cost.



This accelerated depreciation could provide a significant advantage for businesses with tax liabilities large enough to benefit from the deduction. You'll definitely want professional tax advice, though, prior to beginning the project to ensure it meets the regulation's requirements.

How bank lenders see things

A bank loan is one financing possibility to consider. This may be a more attractive option if you also are considering a new or refinanced mortgage for your business property.

Some lenders now are offering "energy efficient" mortgages (which also may be called "energy improvement" mortgages). These consider the savings energy-efficient and renewable-energy systems will generate when determining a borrower's ability to repay the loan.

Additionally, lenders are beginning to realize that a renewable-energy system adds value to a building, which can lead to a higher appraisal once the system is installed.

Third-party financing

A number of companies, including some solar photovoltaic (PV) panel manufacturers, now are offering to finance equipment purchases and installation. These can amount to a sort of *leaseback* arrangement.

In such a deal, the building owner pays nothing upfront for purchasing and installing the solar PV or wind turbine. Instead, the owner signs an agreement with the manufacturer's financing group to pay a set amount every month for electricity. Instead of paying your utility, you are paying the financiers, who remain the equipment's owners.

Under these arrangements, tax credits, rebates and any green energy credits flow to the financing group. What's left for the building owner, then? The main benefit is that you can disregard the rate-boosting efforts of your local power company; your electric bills will remain constant.

Additionally, such financing deals may include a stipulation allowing the building owner to purchase the equipment (at a reduced price) when the contract period ends.

Managing expenses

One of the best first steps you can take to minimize the overall cost of renewable-energy installations is to maximize your facility's energy efficiency. As energy professionals like to say, *the cheapest kilowatt is the one you never use.*



Find More Information

- Alliance to Save Energy (www.ase.org) offers a range of information on renewable-energy systems. Included: Detailed info on tax credits enacted under the American Recovery and Reinvestment Act.

- The Energy Efficiency and Renewable Energy website's financing section (www.eere.energy.gov/financing) describes Department of Energy financial incentives for businesses and homeowners.

- Solar Energy Industries Association (www.seia.org) is the advocacy group representing solar manufacturers. Click through to the Federal Issues page to find detailed information on the provisions of the stimulus package relating to solar energy.

- The Solar Guide (www.thesolarguide.com) provides overviews of both solar and wind energy systems. Includes guidance on vendor selection and links to specific national incentives on the dsire.org website.

- Tax Incentives Assistance Project (www.energytaxincentives.org) provides a broad overview of tax incentives available for both energy efficiency and renewable-energy upgrades.

- Mentioned previously was www.dsireusa.org, the Database of State Incentives for Renewables and Efficiency.

By improving your building's insulation, installing energy-efficient windows and upgrading lighting equipment, you'll reduce your electricity demand along with the size of the renewable system required to meet that need.

This approach will require an up-front investment in an energy audit (to determine the most cost-effective improvements) and in the upgrades themselves. But you'll begin realizing utility savings right away, and you'll end up paying less for your renewable system or earning more from the surplus electricity you'll be able to sell back to the utility.

Find The Added Value In Renewables

Suppliers and financiers may offer a contract in which the supplier obtains any renewable-energy certificates earned by the installation.

If you are not familiar with these credits, negotiating them away might mean little to you. But be aware: Based on the amount of electricity your building's renewable system generates, these credits are beginning to have value on the open market. Values seem to run especially high in states that have set *renewable portfolio standards*. These RPS require utilities to generate or purchase a set percentage of the electricity they sell from renewable sources.

For background, see http://en.wikipedia.org/wiki/Renewable_Portfolio_Standard

Larger companies have benefited from similar arrangements for years. Energy services companies (ESCOs) became profitable in the 1980s, when utility demand-side management programs began paying businesses to reduce their energy use. In those arrangements, the ESCO would complete energy efficiency improvements and share the resulting savings with the business owner over an agreed upon period.

Some electric utilities are beginning to get into this business, as well. For example, New Jersey's PSE&G has begun a Solar Loan program as part of its effort to meet state-mandated targets for renewable-energy sales. The utility will install equipment without an upfront payment.

In return, the building owner enjoys free electricity from the system. The loan is repaid over a 15-year period, not in cash, but in solar renewable-energy certificates. One certificate, with a floor value of \$475, is generated for every 1,000 kilowatt hours the system produces.



About the Electrical Design Library

This document and other free reports are available at
www.electricaldesignlibrary.com

©Copyright 2009 by the National Electrical Contractors Association (NECA). All rights reserved. Published by the National Electrical Contractors Association for the educational use of our present and future customers. To find a qualified, professional electrical contractor, use our online service at www.necacconnection.com. NECA is located at 3 Bethesda Metro Center, Suite 1100, Bethesda, MD 20814. Phone: 301-657-3110. Fax: 301-215-4500. Web: www.necanet.org. E-mail: edlinfo@necanet.org.

Index No. 3025129