



Financing Renewable Energy and Energy Efficiency

By Glen Andersen

Some states allow local governments to finance loan programs.

Using the special improvement district concept helps finance energy projects.

Residents can apply for low-interest loans to finance projects.

The high initial costs of installing renewable energy equipment or improving energy efficiency can deter businesses and homeowners from making such changes. With long-term financing, however, these projects often save enough money to pay finance costs, leaving the homeowner or business with a profit. Lowering costs through affordable, easy-to-get financing is increasingly seen as an important step in giving homes and businesses the opportunity to generate energy and access untapped energy-saving opportunities. States are helping property owners take advantage of these energy resources by enabling local governments to operate and finance renewable energy and energy efficiency loan programs.

Applying the concept of special improvement districts to renewable energy and energy efficiency projects allows cities and municipalities to help residents finance energy projects. Local governments in many states have used special improvement districts to raise money for projects such as paving streets, installing streetlights and redeveloping blighted areas. When applied to energy projects, the mechanism allows local governments to create districts—sometimes called renewable energy districts—and issue bonds to fund renewable and energy efficiency loan programs.

Residents within these districts then can apply for low-interest loans that are repaid through an assessment on property taxes or added to the utility bill. This resolves the question of what to do if the owner sells the property, since the benefits and payments stay with the property.

The programs allow property owners to install renewable energy equipment or upgrade efficiency at a low monthly cost. The work can be completed with no upfront costs and usually no increase in cost to the owner, since the energy savings should be equal to or greater than loan payments

How Payback Works

The cost of improving energy efficiency in a poorly insulated house can often be recouped in as little as three years, while a solar system might take 10 to 20 years to pay for itself. When the loan program is incorporated into property taxes, an owner might finance an insulation and window upgrade project over five or more years. If the project is done correctly, the owner sees immediate benefits, since the property tax increase that goes to pay off the loan is less than energy savings from the upgrades. When the loan is repaid, the owner realizes the complete energy savings, which are likely to be hundreds of dollars annually, and higher for businesses. Payback times for solar panels are much longer, often 10 to 20 years. One key factor in payback times for solar energy is energy efficiency. Energy efficiency improvements can lower the number of solar panels required, reducing costs and accelerating payback, since energy efficiency upgrades cost much less than additional solar equipment.

assessed to the property tax. If the program is set up to accurately evaluate the cost of an energy project and resulting energy savings, it can help the owner eliminate unprofitable upgrades. Some programs restrict upgrades to a specified list and require the use of qualified contractors.

State Action Laws in 16 states allow property financing. California became the first with passage of Assembly Bill 811 in 2008; other states have used it as a model. The law allows cities, counties and neighborhoods to use bonds to fund financing programs for renewable energy, energy efficiency and water efficiency improvements. Property owners who use property tax financing for energy projects must agree to an assessment on the property tax bill for up to 20 years. Local governments can determine which projects are eligible for loans.

Three California counties now have programs that allow property tax financing for energy projects, a fourth is planning one, and seven others—including Los Angeles—are discussing potential programs. In Sonoma County, nearly \$10 million worth of projects have been funded, including installation of energy efficient windows, solar panels and heat-reflecting roofs.

Many states now allow local governments to determine which renewable or energy efficiency technologies will be eligible, while others restrict eligibility. New York, for example, allows solar thermal but not photovoltaic solar panels. Ohio allows only photovoltaic solar panels or solar-thermal and excludes other types of renewable energy and energy efficiency. Recommended installations in some states include photovoltaic solar panels, solar water heating, geothermal heat pumps, high-efficiency furnaces and air conditioners, efficient windows and insulation.

States That Allow Property Financing

California
Colorado
Illinois
Louisiana
Maryland
Nevada
New Mexico
New York
North Carolina
Ohio
Oklahoma
Oregon
Texas
Vermont
Virginia

Fifteen states allow property financing.

Many states allow local governments to determine which projects will be eligible.

Portland's Low-Cost Energy Efficiency Program

Oregon's law allows loan repayment on utility bills. Portland's pilot program is targeting low-cost energy efficiency improvements in 500 homes and aims to lower energy bills by more than the financing costs, providing a net savings to the consumer. Early goals include installing insulation and sealing leaky air ducts. Portland is the first in the state to implement such a program. Initial funding will come from the state's Clean Energy Fund and from federal stimulus money dedicated to energy efficiency. A local bank will manage funds to structure financing packages for property owners. If the financial model is successful and interest is sufficient, the city plans to expand the program to finance new furnaces, windows and solar panels.

Providing local governments with the ability to address upfront costs is a low-cost tool that can make renewable energy and energy efficiency a logical choice for homeowners and small businesses. These energy improvements reduce energy costs for owners, and help utilities by lowering energy demand during times of peak use during the day when generating energy is most expensive. This reduces utility costs and can delay or prevent construction of new power plants, ultimately lowering consumer bills.

Contact for More Information

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