



PUBLIC-PRIVATE FINANCE TOOLS FOR ENERGY EFFICIENCY

Global companies are under increasing pressure to be energy efficient, from New York City to Shanghai. Financing has long been a barrier, but a variety of financing tools can help unlock capital flows. To help governments and business understand how they can leverage energy efficiency investment, we explain five public-private financing mechanisms.

ON-BILL FINANCING

HOW DOES ON-BILL FINANCING PROVIDE CAPITAL FOR ENERGY EFFICIENCY?

On-bill financing allows a loan for energy efficiency measures to be repaid over time via an additional line item on the recipient's utility bill, which decreases repayment risk for the lender. The lender in "classic" utility on-bill financing has traditionally been the utility itself. Hybrid models have also emerged in which public and private funds are pooled to offer low-interest loans, with repayment similarly attached to the utility bill. The utility then collects the payment and returns it to the lender, which lowers the lender's administrative costs. The utility customer benefits from lower energy costs after retrofits, and typically pays loans back over a period of about 2–5 years.

WHERE HAS THIS MODEL BEEN IMPLEMENTED?

One example of a successful on-bill financing program is the Connecticut Energy Efficiency Fund's Small Business Energy Advantage Program, which is administered by two electric utilities in the state. The fund finances low-interest loans for projects using pre-approved contractors, and eligibility is determined by the customer's payment history rather than by credit check. In the case of one utility, United Illuminating, over 25% of the small business customer base has participated in the program.

COMMERCIAL PROPERTY ASSESSED CLEAN ENERGY (PACE) FINANCING

HOW DOES PROPERTY ASSESSED FINANCING WORK?

Property assessed financing¹ reduces repayment risk and lowers interest rates by securing loans with a tax lien on the property. The key attributes of property assessed financing are that programs offer upfront loans for voluntary energy efficiency upgrades, which are paid back through an extra line item on the property tax bill. Payments should be less than the energy savings to yield a net gain for the consumer.

1. Property Assessed Clean Energy financing goes by the acronym PACE in the U.S., but has also been piloted in the UK, where it was called Pay As You Save (PAYS).

HOW ARE PROPERTY ASSESSED (PACE) LOANS CHanneled TO PROJECTS?

Some cities issue bonds to raise money that they lend directly to borrowers for upgrades. Another option leverages commercial banks to provide loans, either to property owners directly or to Energy Service Companies (ESCOs). Such programs rely on commercial banks to make loans to companies for retrofits; the city simply assigns the liens on the properties to the bank as security. Loan terms typically vary from 5–20 years and interest rates are low, reflecting reduced risk because the loan is senior to all other obligations.

WAS PACE FINANCING DEEMED A VIOLATION OF MORTGAGE AGREEMENTS IN THE U.S.?

Tax liens are commonly used by cities to fund public services, and the mortgage industry in the U.S. has accepted this as standard practice. However, commercial PACE programs require that property owners obtain consent from their mortgage holders before participating if the PACE loan has priority repayment ahead of the mortgage. This is in part to avoid the resistance that residential PACE programs encountered from major mortgage underwriters, which has largely stopped residential PACE programs in the United States. Commercial PACE programs have thus far been allowed to continue without being deemed a violation of mortgage lending rules.

WHERE HAS THIS MODEL BEEN IMPLEMENTED?

Seventeen U.S. commercial PACE programs are either in operation or planning, and several Canadian cities are considering programs. Proven successes include the Sonoma County Energy Independence Program (<http://www.sonomacounty-energy.org/>) and Boulder, Colorado's Climate Smart Program (<http://climatesmartloanprogram.org/>).

SUSTAINABLE ENERGY UTILITY MODEL

WHAT IS A SUSTAINABLE ENERGY UTILITY?

A Sustainable Energy Utility (SEU) is an institution whose core service is to facilitate access to energy efficiency. It is typically created through legislation to administer financing programs, offer technical services, and coordinate the services of private

ESCO's and banks. An SEU is not a financing mechanism in and of itself – rather, it is a “one stop shop” that leverages financing tools, reduces transaction costs for lenders, and organizes actors to make energy efficiency significantly easier.

WHERE ARE SEU'S ALREADY AT WORK?

Vermont, Wisconsin, Oregon, New York, Delaware, and the District of Columbia all have independent not-for-profit providers of energy efficiency services that perform the functions of an SEU. Efficiency Vermont is one of the oldest: founded in 2000, it has significantly reduced the upfront cost to deliver energy savings. It is funded by a “wires charge” on each kWh sold in Vermont, which had previously been given to the utilities to perform demand side management. Delaware's SEU was authorized to issue tax-exempt bonds and collect funds from other sources. It will create a Sustainable Energy Revolving Fund making loans at 3.5–5% interest rates, and can also award rebates.

LOAN GUARANTEES

HOW DO LOAN GUARANTEES IMPROVE FINANCING?

Energy efficiency investments are often perceived as risky by banks because of their unfamiliarity with the technologies and investment structures used, as well as the monitoring needed. Companies can typically only borrow money to finance these measures if they have good credit and give the lender recourse to their assets as a guarantee. However, when a public agency with good credit offers a loan guarantee, banks can lend at lower interest rates and/or extend the term of the loan because the guarantor has promised to ensure timely repayment. Individual loans or a portfolio of loans can be covered by either partial or full risk guarantees.

LOAN LOSS RESERVE FUNDS

WHAT IS A LOAN LOSS RESERVE FUND?

A loan loss reserve fund (LLRF) is another way of backing energy efficiency borrowers. If the borrower defaults, then the lender is paid back out of the reserve fund, reducing or eliminating repayment risk. A LLRF can secure a single loan or a portfolio of loans, and is often used for the latter.

One example is the loss sharing facility implemented by the Global Environment Facility (GEF) and the International Finance Corporation (IFC) as part of the China Utility-Based Energy Efficiency (CHUEE) program. The IFC and the GEF set up a LLRF that guarantees loans made by local commercial banks to energy management companies who finance upgrades for their customers. This “Loss Sharing Facility” will refund 75% of the first 10% of the loan amount in case of default, and 40% of any losses on the remaining 90% of the loan amount. With

\$USD 50 million in loss reserve funds contributed by the GEF and IFC, the program seeks to mobilize \$USD 0.7-1.45 billion for energy efficiency project financing from the private sector.

WHAT IS THE DIFFERENCE BETWEEN A LLRF AND A LOAN GUARANTEE?

A LLRF is another way to guarantee a loan without relying on the credit of an institution as Guarantor. An actual sum of money must be set aside in an escrow account, rather than an organization pledging its credit. Either one can be structured to repay full or partial losses in case of default.

Loan guarantees and reserve funds can work in conjunction with other types of loans. They can also be coupled with PACE programs to make mortgage lenders more comfortable that PACE loans will not increase mortgage defaults. For example, California passed a law in 2010 establishing the PACE Reserve Program to help local jurisdictions raise bond revenues at lower cost to fund their PACE programs, and thereby offer lower interest rates to consumers. A LLRF could be seeded by public funds but become self-sustaining if funded by a fee on each loan.

HOW CAN GOVERNMENTS RAISE FUNDS TO LEVERAGE ADDITIONAL PRIVATE-SECTOR LENDING?

The five financing programs described above can be implemented by local, state, and federal governments in cooperation with the private sector. Such programs have leveraged significantly more private investment than their cost to administer, but do still require some upfront public investment. Governments can raise funds by establishing a small utility fee on electricity sold, requiring utilities to re-invest some revenues in energy efficiency, and/or issuing bonds.

In summary, barriers to financing energy efficiency can be overcome through public-private financing tools. Small investments by government to reduce the risk of lending to energy efficiency projects can unlock major private sector investment, as well as significant environmental benefits.

RESOURCES FOR FURTHER INFORMATION

- U.S. Department of Energy. *Solution Center*. <http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/default.html>
- New Energy Cities. *Energizing Cities: New Models for Driving Clean Energy Investment*. <http://newenergycities.org/>
- CalCEF. *Energy Efficiency Paying the Way: New Financing Strategies Remove First-Cost Hurdles*. www.calcef.org/innovations
- PACE Now. <http://pacenow.org/blog/commercial-pace/>
- Institute for Building Efficiency. *Unlocking the Building Retrofit Market: Commercial PACE Financing*. <http://www.institutebe.com/>
- Regulatory Assistance Project. <http://www.raponline.org/>

Author: Jenna Goodward