

State Residential Energy Efficiency Loan Programs

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September 2007

CONTENTS

About the Energy Programs Consortium	ii
Executive Summary	iii
Introduction	1
Context for Energy Efficiency Lending	2
Recommendations for Energy Efficiency Loan Programs	3
1. Conduct Market Research to Define a Market Niche in Relation to Other Financing Sources in the Market	4
2. Loan Security Is Not Required in all Cases	6
3. Use Energy Audits for Larger Loans; Prescriptive Measures Can Be Effective for Most Loans	7
4. Use Innovative Financing Measures to Reduce Interest Rates	10
5. Marketing Efforts Aimed at Contractors Are Cost-Effective: Co-Branding With Utilities and Others Is Also Useful	13
6. Consider Use of a Third-Party Financing Service	14
Appendix. Websites of State Energy Efficiency Loan Programs	16

Figures and Tables

Figure

1. States that Have Residential Energy Efficiency Loan Programs	1
-----------------------------------------------------------------------	---

Table

1. Oregon Energy Loan Program Lending 2000-2006	3
2. State Energy Efficiency Loan Program Caps and Typical Loan Amounts	4
3. Security Requirements for Energy Efficiency Loans	7
4. Summary of Audit Requirements in Selected States	8
5. Competitive Consumer Credit Options	10
6. Energy Efficiency Loan Program Interest Rates/Key Terms	12
7. Summary of Marketing Efforts for Loan Programs	13

ABOUT THE ENERGY PROGRAMS CONSORTIUM

The Energy Programs Consortium (EPC) is a 501(c)(3) nonprofit organization that conducts policy research and demonstration programs. It is sponsored by the four main organizations representing state energy and regulatory agencies: the National Association of State Energy Officials; National Energy Assistance Directors' Association; National Association of Regulatory Utility Commissioners; and National Association of State and Community Services Programs.

EPC is supported by grants from the Ford, Heron and Surdna foundations; state energy and housing finance agencies; the U.S. Environmental Protection Agency; and the U.S. Department of Energy.

Other reports prepared by EPC in this series include:

- *Income, Carbon Emissions and Energy Efficiency*
- *The New Energy Efficient Mortgage*
- *Energy Efficiency in Multi-Family Housing*
- *State-Sponsored Energy Efficiency Grant, Loan and Tax Credit Programs*

Copies of these reports can be downloaded from the EPC website at: www.energyprograms.org

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EXECUTIVE SUMMARY

This issue brief offers recommendations on the structure of state energy efficiency loan programs in the residential sector. It describes the primary features of energy efficiency loan programs in the 16 states that operate them. It offers the following set of five conclusions about trends and characteristics of loan programs:

1. States use two different approaches to energy efficiency lending in the residential sector: a) small unsecured loans of up to \$10,000 to cover immediate needs that can be addressed through prescribed measures and Energy Star certified purchases, and; b) larger loans to cover more extensive investments in energy efficiency. These larger loans may be secured and may more frequently require an energy audit.
2. Subsidies vary considerably in both their size and their structure.
3. Programs that combine grants and loans that consider the energy efficiency of the whole house are becoming more common. This whole-house approach contrasts with the more traditional approach that funds energy efficiency improvements on a component by component basis. The whole-house approaches are often called Assisted Home Performance or Home Performance.
4. Most programs devote relatively little funding to outreach and marketing, relying instead on established networks through contractors, financial institutions or through word of mouth.
5. Although states have gained a great deal of experience in loan and other financing programs, they frequently do not yet seem to have an accurate sense of just how much money, whether through grants or subsidies, is required to promote energy efficiency at different income levels.
6. New state models for marketing and designing energy efficiency loan programs offer a great deal of promise.

It also offers a set of seven lessons based on a review of the programs and interviews with program administrators. These lessons are as follows:

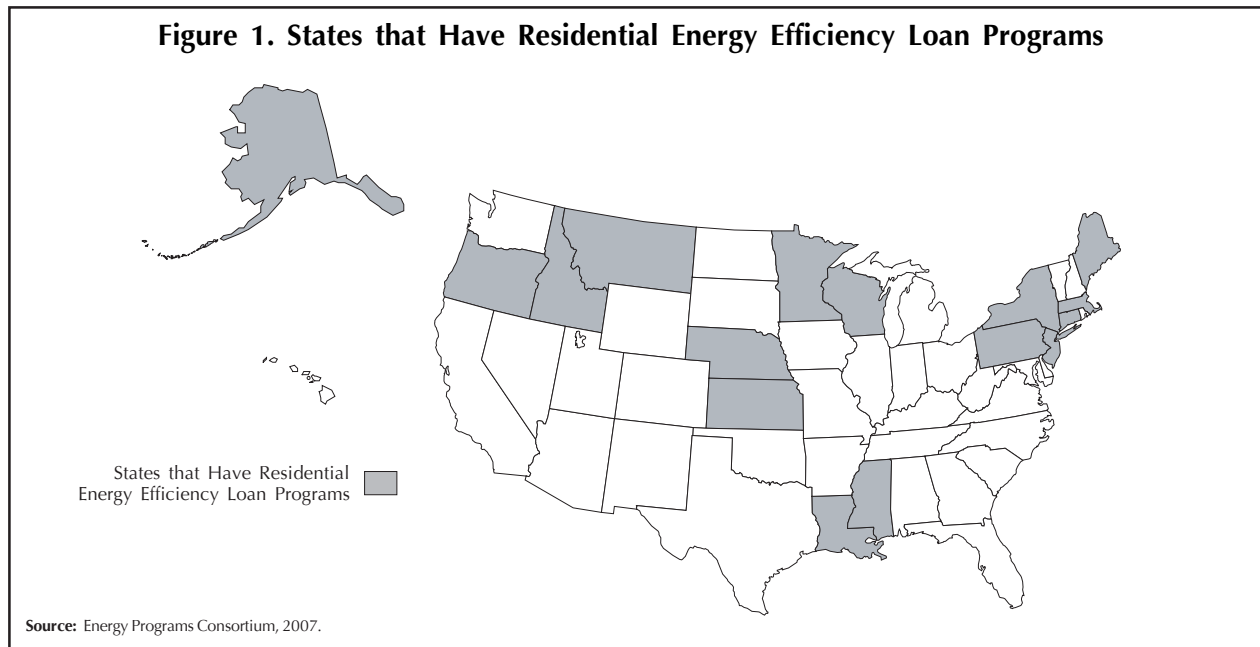
1. Given the large volume of residential loans and their small size compared to loans in other sectors, loan programs should look at ways to keep loans simple and transaction costs low for individual loans.
2. Conduct market research to define a market niche, and design the program accordingly.
3. Use energy audits only when necessary for larger loans; prescriptive measures can be effective for most smaller loans.

4. Security and liens are not required in all cases.
5. Use innovative financing measures to reduce interest rates.
6. Marketing efforts aimed at or conducted through contractors are cost-effective; co-branding with utilities and others is also useful.
7. Consider use of a third-party financing service.

INTRODUCTION

This issue brief describes the structure of state-sponsored residential energy efficiency loan programs in 16 states and summarizes the key lessons learned from those programs. These programs generally provide unsecured loans—averaging about \$10,000—and include funding for energy-efficient appliances, insulation, windows and heating and cooling system replacements and upgrades.

Figure 1 shows the states that have residential energy efficiency loan programs.



This paper begins with a brief review of the context for the energy efficiency lending market and continues with a set of seven recommendations for state energy efficiency loan programs. Overall, the paper arrives at six major conclusions:

1. States use two different approaches to energy efficiency lending in the residential sector: a) small unsecured loans of up to \$10,000 to cover immediate needs that can be addressed through prescribed measures and Energy Star certified purchases; and b) larger loans to cover more extensive investments in energy efficiency. These larger loans may be secured and may more frequently require an energy audit.
2. Subsidies vary considerably in both their size and their structure.
3. Programs that combine grants and loans and that consider the energy efficiency of the whole house are becoming more common. This whole-house approach contrasts with the more traditional approach that funds energy efficiency improvements on a component-by-component basis. The whole-house approaches are often called Assisted Home Performance or Home Performance.

4. Most programs devote relatively little funding to outreach and marketing, relying instead on established networks through contractors, financial institutions or through word of mouth.
5. Although states have gained a great deal of experience in loan and other financing programs, they frequently do not yet seem to have an accurate sense of just how much money, whether through grants or subsidies, is required to promote energy efficiency at different income levels.
6. New state models for marketing and designing energy efficiency loan programs offer a great deal of promise.

CONTEXT FOR ENERGY EFFICIENCY LENDING

Energy efficiency loan programs have met with varying degrees of success for up to 20 years in some states, and new loan program models are developing that, if refined, could significantly increase overall investments in energy efficiency. State loan programs typically take one of two forms: 1) an interest rate buydown in which a state fund purchases or pays for a portion of a loan, allowing the private sector lender to reduce the interest rate, and; 2) a direct loan program in which the state, or a private institution using state funds, makes loans through a revolving loan fund for energy efficiency at below-market interest rates.

One of the most important steps that state loan programs need to take is to define their market and design their loan product accordingly. A detailed characterization of energy efficiency loans and the loan market would provide additional information, but the following three points offer a general context:

- Most single-family residential state energy efficiency loan programs loan between \$5,000 and \$10,000 per loan.
- Customers use the majority of the loans to finance defined, well-known and understood products.
- A subset of this market serves low- to moderate-income borrowers at below-market interest rates.

Additional characterizations of this market would describe other important factors such as the circumstances that lead people to invest in energy efficient products (emergency furnace replacements, new whole-house construction), income level of borrowers and other market characteristics. This type of more detailed market characterization would allow more precise design of a loan product to match the circumstances of borrowers.

Transaction Costs for Residential Energy Efficiency Lending Can be High

Lending in the residential sector often leads to many relatively small loans and transaction costs that have potential to be higher than in the industrial or commercial sector. One indication of this comes from the Oregon Energy Loan Program, which markets loans to the residential, commercial, industrial and non-profit sector; residential loans represent 17 percent of the total number of loans but only 0.55 percent of the total loan value from 2000-2006.

Table 1. Oregon Energy Loan Program Lending 2000-2006

Sector	Number of Loans	Average Loan Size	Total Loan Value	Percent of All Loans	Percent of Loan Value
Commercial	288	\$467,713	\$134,701,440	40.62%	39.02%
Municipal	207	\$680,067	\$140,761,550	29.20%	40.78%
Nonprofit	14	\$1,422,693	\$19,917,700	1.97%	5.77%
Residential	123	\$15,468	\$1,902,563	17.35%	0.55%
State agency	77	\$622,092	\$47,901,048	10.86%	13.88%
Total	709	\$486,861	\$345,184,301	100.0%	100.0%

Source: Oregon Department of Energy, 2007.

Given the large volume of residential loans and their small size compared to loans in other sectors, loan programs should look at ways to keep loans simple and transaction costs low for individual loans. Many of the recommendations below are related to measures that can reduce transaction costs for smaller residential energy efficiency loans while still maintaining sufficient security for the loan.

Residential Sector Energy Efficiency Lending Often Involves an Element of Energy Education

The final general context point is that state-managed energy efficiency loan programs may do more than just loan money; state loan program managers often say that part of their mission is to educate the citizens of their state about energy efficiency. For example, the Idaho loan program officers frequently find themselves filling the role of energy efficiency educator and counselor instead of a straightforward loan officer. This educational function is often an important part of the mandate for the state energy offices that run some programs, although it is not part of the role that a traditional bank loan officer might take on.

RECOMMENDATIONS FOR ENERGY EFFICIENCY LOAN PROGRAMS

Based on a review of the existing state energy efficiency loan programs in 16 states and interviews with the program administrators, EPC offers the following six categories of recommendations for energy efficiency loan program design.

1. Conduct market research to define a market niche, and design the program accordingly.
2. Use energy audits only when necessary for larger loans; prescriptive measures can be effective for most loans.
3. Be strategic about when to require security and liens.
4. Use innovative financing measures to reduce interest rates
5. Develop marketing efforts aimed at or conducted through contractors that are cost-effective; co-branding with utilities and others is also useful.
6. Consider use of a third-party financing service.

1. Conduct Market Research to Define a Market Niche in Relation to Other Financing Sources in the Market.

Many state energy efficiency loan programs in the residential sector attract homeowners who are borrowing \$10,000 or less, although the programs often will loan up to \$20,000 per borrower. Table 2 shows state energy efficiency loan caps and typical loan amounts. These loan amounts are at a level that is often higher than many people feel comfortable putting on a credit card but lower than would be worth the cost and effort of a typical home equity loan or cash-out refinance. In many cases, consumers' alternative is an unsecured credit card offered by a big box retailer—often offered at a limited-time promotional rate.

Table 2. State Energy Efficiency Loan Program Caps and Typical Loan Amounts			
State	Single Family Loan Minimum/Maximum	Typical Loan Amount	Multi-Family Cap (if applicable)
Connecticut	\$400-\$15,000	\$10,000	\$60,000 (for building with more than 5 units)
Idaho	\$1,000-\$15,000	\$9,000	Same loan for single-family and multi-family
Kansas	State contribution limited to \$7,500. Bank may loan additional amounts.		
Maine	\$2,800-\$15,000	\$13,500 (Program still new, with only 30 loans issued)	
Massachusetts	Commonly \$15,000 (\$10,000 with one lender); at least one unit must be owner-occupied.	\$9,000	
Minnesota Rental Energy Loan Fund	\$500-\$10,000	\$8,000	Multi-family buildings eligible for same program.
Montana	\$40,000	N/a	Multi-family buildings eligible for same program.
Nebraska	Energy Star equipment maximum: \$10,000 Single family: \$35,000	\$6,000	\$70,000
New Jersey	\$2,500-\$20,000		

State	Single Family Loan Minimum/Maximum	Typical Loan Amount	Multi-Family Cap (if applicable)
New York— <i>Two Single-Family Programs:</i> 1. Home Performance with Energy Star Energy \$mart Loan (1-4 Family Homes) 2. Home Performance with Energy Star Energy Star Loan (1-2 family homes)	\$0-\$20,000 Maximum, depending on credit score, of up to \$15,000 or \$20,000	\$10,400 \$7,500	Energy \$mart Loan (<i>Existing Multi-Family</i>) cap is Lesser of \$5,000/unit or \$2,500,000. Additional \$2,500,000 available if the project incorporates advanced electric meters. Energy \$mart Loan (<i>New Construction Multi-Family</i>) cap is \$1 million plus an additional \$500,000 for green building improvements.
Oregon	\$15,000 minimum	N/a—loans of less than \$20,000 are rare, given the fee structure	
Pennsylvania	\$10,000 maximum with larger loans available in some cases.	\$3,000-\$10,000	Eligible for same program as long as owner occupied.

Source: Energy Programs Consortium, 2007.

In a few cases, state loan programs may not compete successfully with other sources of funding for energy efficiency improvements because the state funds are priced higher or because they require paperwork that is not necessary for competitors' loans. For example, the Oregon Department of Energy's Small Scale Local Energy Project Loan Program has a current interest rate of 6.99 percent based on the interest rate of bonds that it issues. The program also has a fee structure that is set in legislation. Oregon's energy office has found that for smaller residential loans, a secured line of credit or a cash-out mortgage refinance may offer customers lower fees and interest rates, and may be accessible through approvals that are already underway as part of the refinance process. As a result of its fee structure, the Oregon loan program has found that it works best with residential loans greater than \$20,000.

Oregon's energy efficiency loan program is unusual in that it aims at this market for loans above \$20,000. Other states have found that their loan programs that offer smaller loans work best when they are as easy as possible for the consumer to use; customers may not choose to use a loan program that requires them to fill out extensive forms, to wait for long periods for loan approval, to provide security in the form of a lien or to have an energy audit. State loan programs should consider their market niche in light of these factors.

2. Loan Security Is Not Required in All Cases

Many states require security or a lien on property for loans, particularly for larger loans. It is important to consider security requirements partly because of the additional time and effort they require for both the lender and the borrower and partly because they add cost to a loan which must either be absorbed by the lender or incorporated into the fees that the lender charges the borrower. The fees that are involved in paperwork to document the security could reach \$200 or more. Idaho places a lien on the borrower's property. Oregon, which tends to loan at levels above \$20,000, requires security for all loans. New Jersey offers an unsecured loan with no fees, points or closing costs, with a 30-minute approval time. The New York State Energy Research and Development Authority (NYSERDA) Energy Smart Loan for 1-4 family homes requires security on loans above \$7,500 except on purchases of Energy Star appliances and grid-connected photovoltaic systems. NYSEDA's Energy Star Loan program, which tends to provide approximately \$7,500 per loan and is administered separately from the Energy Smart Loan, does not require security. Maine Housing's program does require security—although loans have tended to be larger and interest rates lower than in most states.

Pennsylvania's Keystone HELP (Home Energy Loan Program) is an energy efficiency loan program funded by the Pennsylvania Treasurer's Office and run by AFC First, a third-party financing organization. Keystone HELP loans do not typically exceed \$10,000, are unsecured and do not place a lien on property. The rationale behind the decision not to require security is two-fold:

1. The Pennsylvania Energy Development Authority provided a grant to seed a \$900,000 loan loss reserve fund. This fund allows the lender to be more flexible in its security requirements.
2. AFC First, the Pennsylvania loan program administrator, sees its primary competition as unsecured lines of credit and credit cards from Lowe's, Sears or Home Depot. These are available for any purchase at the store, regardless of whether or not it meets tough energy efficiency standards. These financing products typically offer promotional rates over a 6-to-12 month period but charge higher rates after the promotional period ends. They are easily accessible with easy approvals; an energy efficiency loan product that demands significantly more work and documentation than these in-store products faces a difficult time in this market.

Flexibility is Critical for Larger Loans

Loan programs for larger loans (those above \$10,000-\$20,000) that allow loan officers to work flexibly with borrowers on qualifying terms have been successful in Oregon. The Oregon State Energy Loan Program (SELP) places a lien on the borrower's property, but may not insist that the lien be placed on the borrower's primary residence (perhaps placing it instead on another property). Similarly, the loan officer is able to be somewhat flexible in defining the loan-to-value ratio if the borrower's credit history is good.

Table 3 shows the security requirements in selected states.

Table 3. Security Requirements for Energy Efficiency Loans	
State	Security Requirements
Connecticut Housing Investment Fund	Lien secured against the legal agreement—if the property loan becomes due, the energy efficiency component is also due.
Idaho Energy Office	Lien placed on property.
Maine	Security required.
Massachusetts	Some lenders place a lien on property, some do not.
Minnesota Center for Energy and Environment	Lien placed on property
Nebraska	Lender decides on terms of loan. State is not the lender, but participates in the loan.
New Jersey	Unsecured loan
New York	Security required for loans of greater than \$7,500 in Energy Smart Loan program. No security required in Energy Star Loan program. Liens are required in both New York multi-family programs.
Oregon	Security required, but loan officers are given some discretion in how this is set, depending on the credit history of the borrower. An Oregon program administrator cited an example of placing a lien on a fully owned second home as opposed to a primary residence with a higher loan-to-value ratio.
Pennsylvania Keystone HELP Program/AFC First Financial	Unsecured loans.

Source: Energy Programs Consortium, 2007.

3. Use Energy Audits for Larger Loans; Prescriptive Measures Can Be Effective for Most Loans.

Energy Audits Are Appropriate for Larger Loans

Larger loans—in excess of approximately \$10,000-\$20,000—are best suited for an approval process involving an energy audit. An energy audit could be a simple walk-through or it could include a blower door test or other diagnostics. Either type identifies specific measures that are appropriate for the home; loan programs only finance the measures that are on the energy auditor’s list, typically subject to specific simple payback criteria. In every state that requires an energy audit, the cost of the audit can be rolled into the loan. Table 4 details the states that have audit requirements.¹

1. This table references several different audit protocols, tools and organizations. For further information on these the following: For information on the RESNET see www.natresnet.org. For further information on the TREAT software tool see www.treatsoftware.com. For further information on the Building Performance Institute see www.bpi.org. For further information on the Northeast Home Energy Rating System Alliance see www.energyratings.org.

Table 4. Summary of Audit Requirements in Selected States

State	Audit Requirement
Alaska	Requires a 5* or 5*+ rating on the Alaska Home Energy Rating system. This is a rating system that is specific to Alaska, although similar in many ways to the RESNET audit.
Idaho	Audit required for Home Performance with Energy Star program. A pre and post installation audit is performed. Audit is based on RESNET system.
Louisiana	The Home Energy Loan Program (HELP) offers two options: 1) borrowers request an energy rating for the home and then homeowner picks among appliances recommended in the energy audit; and 2) as an alternative, the program allows the homeowner to not do an audit, but then the homeowner must pick from a prescribed list of items.
Maine	Offers an incentive interest rate of 1 percent if an energy audit is performed. Without an energy audit, the interest rate for the loan is 3 percent. Auditor must be certified with either the Building Performance Institute (BPI), the Northeast Home Energy Rating System Alliance, RESNET or the State of Maine audit protocols. Maine has found that the delivery network of community banks that are the lenders in the program are not as accustomed to evaluating and understanding the results of the energy audit.
Massachusetts	State does not specify an audit protocol. In practice, energy auditors use three different audit protocols, the most common of them based on RESNET protocols. Through the MassSave program, several thousand energy audits are performed in Massachusetts each year, which is an unusually high number for any state.
Minnesota	Minnesota runs two programs with different requirements. The new program for single-family homes does not require an energy audit. The rental program is an older program and does require an energy audit. The audit protocol is based on the former Minneapolis Rental Code; it is not based on a nationally known standard.
Nebraska	The program relies on a prescriptive set of energy efficiency measures. Residential borrowers rarely if ever use the audit. The energy audit is only required if borrower wants to use measures that are not included in the list of prescribed measures. A professional energy auditor can perform the audit or the homeowner can conduct a self-audit using a format provided by the Nebraska Energy Office. Measures adopted by the audit must meet a simple payback of 15 years for building improvements, 5 years for replacement appliances or home electronics and 10 years for all other items.
New Jersey	No audit required, but contractor must be BPI certified.
New York	Energy audit required by an auditor certified by the Building Performance Institute. NYSERDA uses the TREAT audit tool, which was developed on a contract to NYSERDA. It previously used the Home Check program.
Ohio (program closed as of June, 2007)	Energy audit required, using a home energy rating system. ²
Pennsylvania	No energy audit required.

2. A home energy rating is a standardized system that rates the energy efficiency of residences. The rating is a measurement of a home's energy efficiency. Most energy ratings involve an on-site inspection by a trained and certified home energy rater. The home energy rater inspects the home and measures its energy characteristics, including insulation, window efficiency, the heating and cooling system efficiency, the solar orientation of the home, and the water heating system. In most cases, the measurements the rater enters these measurements into a computer program that produces a report of the cost-effective options for improving the home's energy efficiency, rates the home's energy efficiency and estimates energy costs.

Source: Energy Programs Consortium, 2007.

Simplicity—Without Energy Audits—Is Often Key for Smaller Loans

Small loans—typically those that are under \$10,000—are often used for items such as insulation, new lighting, or furnace replacement. Extended approvals, energy audit requirements or other procedures that delay the installation of the measures can slow down the loan program so much that customers choose not to use it. The Connecticut Energy Conservation Loan program had, for several years, required potential borrowers to meet directly with a loan counselor, but found that these sessions discouraged potential borrowers from using the program. The Pennsylvania Keystone Home Energy Loan Program has found that unsecured loans up to \$10,000 to \$25,000 do not require an energy audit as long as borrowers use a set of prescribed measures. These states have found that a set of prescriptive measures with a system of easy approvals based on fixed criteria is best for these small loans.

NYSERDA, on the other hand, has found that a streamlined energy audit is the best approach to help households identify which measures make the most sense for particular circumstances. NYSERDA has chosen to require audits through Building Performance Institute (BPI) certified contractors. However, in the case of the Energy Star loan program, NYSERDA offsets the audit requirement with a streamlined energy efficiency financing process. This easy access to financing combined with the energy audit done by certified contractors turns the audit/finance/install process into a simple one-stop-shop for customers while giving NYSERDA assurance that the energy efficiency loans are financing high-value energy efficiency measures.

Prescribed Measures Lists that Refer to EPA Energy Star Are Common

EPA's Energy Star rating has become the common standard for qualifying appliances that fit into prescribed lists. When borrowers choose from a list of appliances or equipment on a prescribed list they do not need to go through an energy audit. Almost every state loan program reviewed for this effort referred to Energy Star when it laid out its prescriptive set of qualifying measures.

- Louisiana's Home Energy Loan Program (HELP) is an example of one such program. It approves the use of funds for ENERGY STAR-rated clothes washers, dishwashers, refrigerators/freezers, water heaters, lighting fixtures, gas furnaces, boilers, heat pumps, air conditioners, programmable thermostats, building insulation and windows.
- Ohio's Double Savings Loan program (closed as of June 2007) approved a similar list of equipment, and also required that the equipment be ENERGY STAR-rated.
- Massachusetts requires that heating systems be at least ENERGY STAR-rated.
- Kansas will provide loans for purchase and installation of ENERGY STAR appliances and heating and cooling systems. It will also loan for energy efficient doors, windows, ductwork, air sealing, water heaters and insulation, although these standards do not reference ENERGY STAR.

ENERGY STAR does not work for all states in all situations. In one case, Pennsylvania's loan program administrator found that Energy Star did not rate fuel oil-based furnaces and as a result worked with industry to set its own efficiency rating for these appliances.

4. Use Innovative Financing Measures to Reduce Interest Rates

No clear pattern exists among the 16 states that have energy efficiency loan programs for how states set the interest rates for their loan programs. The key factors that determined how states set their interest rates have to do with how much funding they have available through initial appropriations of funds for the loan programs, interest rates on their own bond issues that finance these programs, and how much the program administrators feel is necessary to attract customers to energy efficient products. No state has conducted a detailed analysis of the interest rate reduction necessary to attract customers to loans for energy efficient products. In most cases, interest rates have changed very little, if at all, despite changes in market interest rates. As a result, some states have seen substantial variation in the level of interest in their program, depending on how the program’s interest rate is set vis-à-vis the market rates.

Pennsylvania’s one-year-old Keystone Home Energy Loan Program’s 8.99 percent interest rate is based on the following:

- Rate on an unsecured loan it would charge in the absence of a subsidy..... 9.9-12.9 percent
- Rate that AFC Financial charges for loan origination and servicing..... 4.0 percent of principal
- Rate of return required by the Pennsylvania Treasury Department 5.0 percent of principal
- Interest rate charged to customers 8.99 percent of principal

A pool of \$900,000, 95 percent of which was provided by the Pennsylvania Energy Development Authority and 5 percent by AFC First, created a loan loss reserve for the program. This loan loss reserve also had the effect of reducing the interest rate on the loans by eliminating the need for loan insurance; loan insurance procured on the market would have added an additional 1.5 percent to 2 percent to interest rate.

Table 5 shows, for comparison, the consumer credit rates available through Home Depot and Lowe’s as of mid-2007.

Table 5. Competitive Consumer Credit Options			
Company	Rates (as of June 2007)	Security	Source
Home Depot	0 percent for 6 months. 7.99 percent, 9.99 percent, 11.99 percent, 13.99 percent, 17.99 percent, depending on credit quality	Unsecured loan	www.homedepot.com
Lowe’s	0 percent for 12 months; 21.99 percent thereafter	Unsecured loan	www.lowes.com

Source: Home Depot and Lowe’s, compiled by Energy Programs Consortium, 2007.

Table 6. Energy Efficiency Loan Program Interest Rates/Key Terms

State	Interest Rate/Buydown	Term	Key Features
Alaska Housing Finance Authority Interest Rate Buydown Program	<ul style="list-style-type: none"> • New Homes: 0.25%-0.50% rate buydown. • Existing Homes: 0.125% - 0.75% rate buydown. • Greatest rate buydowns in place for buildings achieving highest energy rating and in homes that have no access to natural gas. • Rate reduction applies to first \$230,000 of home mortgage. 	Matches mortgage term	<ul style="list-style-type: none"> • IRS taxes the HFA on the income earned as a result of the difference between the amount it pays for money and the amount it earns on its money—unless it offsets those earnings with other investments such as energy efficiency. This is a significant motivator for the Alaska program. • No income limitations on loan.
Connecticut Housing Investment Fund	Rate varies based on income level of applicants and building residents: 81%-150% of AMI = 6%; 50%-80% of AMI = 3%; Below 50% of AMI = 1%	Up to 10 years, but typically at 5 years	<ul style="list-style-type: none"> • Very low \$43 fees due at closing. • Rates are below those available for a home equity line of credit.
Idaho Energy Office	4%	5 years	Rate has not varied for many years. Not set up to cover costs.
Louisiana	Interest rate buydown program. State finances financing at 2% up to \$6,000. Bank can finance remainder of the loan (no maximum) at market rate.	5 years	Program is not very active at present. One lender had accounted for most of the lending, but Hurricane Katrina forced that lender to dramatically curtail business. The interest rate buydown program forced the lender to both originate and service the loan, making the loan difficult to impossible to sell to investors. This severely limited the reach of the loan program.
Maine	<ul style="list-style-type: none"> • 1% if energy audit performed • 3% if not energy audit performed. 	Maximum of 15 years	Program is new—began in September 2006, and has issued 30 loans as of June 2007 for a total of \$405,000.
Massachusetts	Buydown from market rates (currently at 7.5% to 8.0%) to: 3% for those with incomes of more than 80% of AMI and up to 1% for those with incomes of less than 80% of AMI.	5-7 years, depending on lender	This is a Mass. Dept. of Energy Resources program, but administered by lenders. Each participating bank has slightly different terms and conditions, so there is no uniform statewide structure.
Minnesota Center for Energy and Environment	<ul style="list-style-type: none"> • Rental Energy Loan Fund = 4%, fixed. • Single family Program = 6.875%, but tie to Minn. Housing Finance Agency rates. 	12-60 months	
Nebraska	50% interest rate reduction, with state's exposure limited to \$7,500, achieved by the state purchasing 50% of the loan, up to \$7,500 and charging 0% interest.	Up to 10 years; 5 years for appliance purchase	

Table 6. Energy Efficiency Loan Program Interest Rates/Key Terms (continued)

State	Interest Rate/Buydown	Term	Key Features
New Jersey	5.99%	3,5,7 or 10 years	Program set up to mirror New York program and is administered by the same entity—Wisconsin Energy Conservation Corporation (WECC) through its Energy Finance Solutions subsidiary.
<i>New York Single-Family and Multi-Family Programs:</i>			
Home Performance with Energy Star Energy \$mart Loan (1-4 Family Homes)	Interest rate reduction of 4%.	Interest rate subsidies are available for up to 10 longer terms allowed without additional subsidy	NYSERDA Energy \$mart Loan Program works with participating lenders in New York State.
Home Performance with Energy Star Energy Star Loan (1-2 family homes)	5.99% or 4.99% depending on which secondary market buyer purchases the loan.		NYSERDA's Energy Star Loan program works with Energy Finance Solutions (EFS), which is described in the next section of this report. EFS has recently begun to sell its energy efficiency loans to American General instead of Fannie Mae because American General has allowed borrowers with lower credit scores to qualify for its loans.
Energy \$mart Loan (Existing Multi-Family)	6.5% rate reduction in New York City and 4% in other covered areas.	Up to 10 years	
Energy \$mart Loan (New Construction Multi-Family)	6.5% rate reduction in New York City and 4% in other covered areas	Up to 10 years	
New York	Single family residential	Up to 10 years; Loan capped at \$20,000	The interest rate buydown works as follows: Lender sets a market-based interest rate and the state pays the lender the net present value of the difference between what the lender would earn from the market-based interest rate and an interest rate that is 4 percent lower.
Oregon	Rate varies. Set at 6.95% as of June, 2007	15 years	Fees are set in statute and are relatively high compared to other states. The application fee is .1 percent (up to \$2500) of the amount requested. The Energy Loan Program also charges an underwriting fee of .5 percent, with a \$500 minimum and \$5,000 maximum. Any amount of the underwriting fee greater than \$500 is credited to the 1 percent loan fee at closing. The loan fee can be paid from loan proceeds. As a result of this fee structure, the loan does not always make sense at smaller loan amounts.
Pennsylvania Keystone HELP Program/AFC First Financial	<ul style="list-style-type: none"> • 8.99% • 6.99% for incomes less than 80% of AMI 	Up to 10 years	A loan loss reserve fund of \$900,000 on the \$20,000,000 of loans allows interest rates to be some 1.5% to 2% lower than they otherwise would need to be. A utility financial contribution allows the special rate for low-moderate income borrowers.

Source: Energy Programs Consortium, 2007.

5. Marketing Efforts Aimed at Contractors Are Cost-Effective; Co-Branding With Utilities and Others Is Also Useful

Almost all state officials interviewed for this effort felt that they had lacked sufficient funds to market their programs. These programs do not have funds to run extensive media campaigns. In general, they try to use existing networks and educated contractors and others with access to the home. Most program administrators saw TV advertisements as too expensive for the return they offered.

As an example of one approach, Oregon has found that co-branding with the utilities as well as other state agencies with similar missions has been effective. NYSEERDA has found that NYSEERDA-sponsored energy efficiency marketing campaigns have complemented its outreach conducted through contractors and lenders. The Pennsylvania Keystone HELP program has a network of close to 600 qualified contractors who have completed a short training course on energy efficiency measures and energy efficiency financing. When these contractors visit customers' homes they not only describe the efficiency measures that are available, but also the Keystone HELP energy loan program.

Table 7 summarizes the major marketing efforts for energy efficiency loan programs in the states.

State	Marketing Effort	Assessment
Alaska Housing Finance Authority	<ul style="list-style-type: none"> • Home shows • First-Time Homebuyer 8-hour Education Programs • Continuing Education for Builders and Lenders • Presentations to Lenders • Web page 	Marketing efforts aimed at educating first-time homebuyers are particularly effective. Infusing discussion of energy efficiency and financing into broader presentations and continuing education has been effective.
Connecticut Housing Investment Fund	<ul style="list-style-type: none"> • PSA on radio and television • Word of Mouth • Printed materials • Web page 	Very limited marketing budget. Posters sent to Town Clerk's office and posted around the time that taxes are due has been effective.
Idaho Energy Office	<ul style="list-style-type: none"> • Ads in <i>NickelsWorth</i> and other local papers • Other local papers • Limited TV and bus ads • Press releases • Home shows • Web page 	Most cost effective advertising has been in <i>NickelsWorth</i> ad paper. TV and bus advertisements were expensive and produced very little. Home shows and press releases have been only moderately successful.
Massachusetts	<ul style="list-style-type: none"> • Marketed through a network of energy auditors • Web page 	The MassSave network is a well-funded network of energy auditors run through the electric and gas utilities and supported by the state public benefit fund. These energy auditors not only conduct audits but also describe the energy loan program option.

Table 7. Summary of Marketing Efforts for Loan Programs (continued)

State	Marketing Effort	Assessment
Minnesota Center for Energy and Environment	<ul style="list-style-type: none"> • Mailings to landlords • Mailings to the Counties • Home shows • NPR sponsorships • Outreach to Contractors • Minnesota Energy Challenge • Web page 	The combination of all these elements, in addition to word of mouth, has worked well, according to staff.
Oregon	<ul style="list-style-type: none"> • Trade shows • State fair • Cross branding with utilities and the Energy Trust of Oregon • Outreach to agricultural community with funding from the U.S. Department of Agriculture • Web page 	The most successful element of this effort has been the cross-branding and cooperative efforts with utilities and the Energy Trust of Oregon. These joint efforts market both energy efficiency technology as well as financing, and use different marketing channels to do so. Oregon's program did not use mailers or commercials because of the high cost.
Pennsylvania Keystone HELP Program/AFC First Financial	<ul style="list-style-type: none"> • Network of 600 qualified and approved contractors • Press conferences • Mail stuffers done by utilities • Web page 	The network of contractors has been a successful marketing channel since it is cost effective (not requiring retail marketing direct to customers) and because it leverages the contractors' access to homeowners at the time they are making decisions about what to build.

Source: Energy Programs Consortium, 2007.

6. Consider Use of a Third-Party Financing Service

New York, New Jersey, Pennsylvania and Wisconsin use a third-party financial service to originate and service their loans. This process has the potential to speed up loan approvals and reduce paperwork for the state agency. Examples of these include:

- Energy Finance Solutions (EFS) is the energy-financing arm of WECC (Wisconsin Energy Conservation Corporation). WECC is a non-profit organization specializing in energy efficiency. Three state energy offices (New Jersey, New York and Wisconsin) use EFS to run their loan programs. EFS offers loans at a rate of 5.99 percent for terms of 1,3,5,7 or 10 years. EFS manages loan origination, credit checks and servicing on behalf of the three state energy offices.
- EnerBank USA is a Salt Lake City-based financial organization that has worked with some states and works with a number of utilities, most notably the Massachusetts utilities. EnerBank offers a private-label brand to its partners, so that a state or a utility would have its own branding and loan program set up with EnerBank. Much like EFS, EnerBank would approve, originate and service the loan.
- AFC First works in Pennsylvania and several other states, and also approves, originates and services loans for energy efficiency. Unlike EnerBank or EFS, AFC Financial certifies a network of contractors who

then are familiar not only with the AFC Financial products but also with energy efficiency as a result of the training and certification procedures. The contractors serve as an important marketing arm of the project.

A typical interaction with a third-party financial institution would work as follows:

1. In the process of working with the customer, a contractor mentions financing options.
2. Contractor either gives information about the third-party finance company to the customer or calls the third-party finance company from the customer's premises. Customer speaks to finance company.
3. Customer is given approval or rejection over the phone, within minutes.
4. Finance company may call contractor's main office to confirm the transaction.
5. In the case of EnerBank, EnerBank issues a two-party check to the customer and the contractor. Upon completion of the work, the customer signs the check and gives it to the contractor. If an energy auditor is involved as an intermediary, EnerBank makes the check out to the auditor, which passes funds to the contractor upon approval of the job.

States are kept informed of progress on a regular basis, with reports on loan volume and value, but do not need to be involved in the day-to-day operation of the loan program.

APPENDIX. WEB SITES OF STATE ENERGY EFFICIENCY LOAN PROGRAMS

Alaska

<http://www.ahfc.state.ak.us/loans/eeirr.cfm>

Connecticut

http://www.chif.org/owner_borrowers/index.shtml#

Idaho

<http://www.idwr.idaho.gov/energy/loans/default.htm>

Kansas

<http://www.kshousingcorp.org/programs/KEEP.shtml>

Louisiana

<http://dnr.louisiana.gov/sec/execdiv/tehasmt/programs/residential/help/index.htm>

Massachusetts

http://www.masssave.com/about/heat_loan.php

Maine

<http://www.mainehousing.org/PROGRAMSHelp.aspx?ProgramID=32>

Minnesota

http://www.mncee.org/programs_residential/rental_rehab_financing/index.php

Montana

<http://www.deq.state.mt.us/energy/Renewable/altenergyloan.asp>

Mississippi

http://www.mississippi.org/programs/energy/comm_ind_efficiency.htm

Nebraska

<http://www.neo.ne.gov/loan/>

New Jersey

http://www.energyfinancesolutions.com/states/jersey/home_performance_jersey/loan_features.html

Oregon

<http://egov.oregon.gov/ENERGY/LOANS/index.shtml>

Pennsylvania

<http://www.keystonehelp.com/>