State-Sponsored Energy Efficiency Grant, Loan and Tax Credit Programs

Energy Efficiency Mortgage Program State Working Group Report

Summary

State governments play a critical and leading role in energy efficiency investment and financing. Last year these programs spent more than $1.1 billion on energy efficiency grant, loan and tax credit programs and have developed a capacity and experience to finance energy efficiency, particularly in new and existing residences.

Each state that runs an energy efficiency financing activity takes a somewhat different approach. Some are small-scale programs funded out of an old and diminishing source of money known as the Petroleum Violation Escrow (PVE) funds.[1] Other states run larger-scale programs from bonds or appropriations and other states use public benefit funds to finance major energy efficiency investments. The largest state activities rely on multi-million dollar public benefit funds for support.

Mechanisms for financing efficiency vary too; some states rely on loans, others grants or tax rebates and incentives. Some, like New York State, use a combination of several kinds of incentives. Some states rely on their utilities to manage energy efficiency investments with funds collected pursuant to state legislation and regulation. Other states manage their efficiency programs "in-house" through their energy office or utility commission. A small group of other states contract out the management of their energy efficiency programs to third parties.

This Issue Brief describes state-level programs to finance energy efficiency in residential housing. After a brief overview of state activities, it will review three categories of state activity: state

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loan programs, state grant and rebate programs, and state tax incentive programs. The majority of these programs are no more than a decade old, and they are growing and changing rapidly as states learn from their experiences. These many and diverse state financing programs offer a wide range of experiences and approaches to financing energy efficiency and can serve as a basis for larger, more coordinated approaches to energy efficiency finance.

While energy efficiency loans do vary in many respects, it is possible to lay out their basic characteristics by discussing seven categories: loan structure and loan caps, interest rates, term of loans, eligibility requirements, pre-approved uses of funds, requirements (or lack of requirement) for an energy audit, and sources of funds.

The state programs to finance energy efficiency fall three discrete categories: loans, grants and rebates, and tax incentives. As shown in Table 1, 36 states plus the District of Columbia offer at least one of these programs: nine states plus the District of Columbia have established tax incentive program; 12 states plus the District of Columbia have a rebate and grant program; 29 states plus the District of Columbia have a supplemental Weatherization program; and 16 states have loan programs. Some states operate several efficiency incentives—Alaska, for example, operates two loan programs.

Residential Energy Efficiency Loans

Sixteen states offer loan programs that support energy efficiency. While energy efficiency loans do vary in many respects, it is possible to lay out their basic characteristics by discussing seven categories: loan structure and loan caps, interest rates, term of loans, eligibility requirements, pre-approved uses of funds, requirements (or lack of requirement) for an energy audit, and sources of funds.

Loan Structure and Loan Caps

States typically offer loans either to builders or directly to residential homeowners. States generally cap the size of each loan, or the size of the state's contribution to the loan. The size of each loan varies a great deal, from as small as $400 to as large as $60,000 in the case of Connecticut's MultiEnergy Conservation Loan program. Typical loans tend to be around $15,000 for a single-family building.[2]

Table 1. Residential Energy Efficiency Incentives

State	Tax Incentive	Rebate/Grant	Low-Income	Loan
Alabama				
Alaska				2
Arizona	1		1	
Arkansas				
California	1		1	1
Colorado		1	1	
Connecticut	1		1	1
Delaware		1		
District of Columbia	1	1	1	
Florida				
Georgia			1	
Hawaii				
Idaho	1		1	1
Illinois		1	1	
Indiana			1	
Iowa			1	
Kansas				
Kentucky			1	
Louisiana		1	1	1
Maine		1	1	1
Maryland	1		1	
Massachusetts	1		1	1
Michigan		1	1	
Minnesota			1	3
Mississippi				
Missouri			1	
Montana	1			1
Nebraska				1
Nevada			1	
New Hampshire			1	
New Jersey		3	1	1
New Mexico				
New York	2	6	1	2
North Carolina				
North Dakota				
Ohio			1	1
Oklahoma	1			
Oregon	1	2	1	1
Pennsylvania			1	1
Rhode Island		1	1	
South Carolina				
South Dakota				
Tennessee				
Texas			1	
Utah				
Vermont		1	1	
Virginia				
Washington			1	
West Virginia				
Wisconsin		3	1	1
Wyoming				
States	**10**	**13**	**30**	**16**
Total No. of Programs	**11**	**20**	**30**	**20**

Table 2. Summary of Loan Caps in Selected States

State	Single Family	Multi-Family (if applicable)
Connecticut	$400-$15,000	$60,000 (for building with more than 5 units)
Idaho	$1,000-$15,000	Same loan for single-family and multi-family
Massachusetts	Commonly $15,000 ($10,000 with some lenders); at least one unit must be owner-occupied.	
Minnesota Rental Energy Loan Fund	$500-$10,000	Multi-family buildings eligible for same program.
Montana	$40,000	Multi-family buildings eligible for same program.
New York	$20,000	Lesser of $5,000/unit or $2,500,000. Additional $2,500,000 available if the project incorporates advanced electric meters.
Ohio	$500-$10,000 for 1-3 unit buildings	
Oregon	$15,000 minimum	
Pennsylvania	$10,000 maximum with larger loans available in some cases.	Eligible for same program as long as owner-occupied.

Interest Rates

Interest rates are generally subsidized through an interest rate buy-down or are offered at a discount to market rates.

Interest rates are generally subsidized through an interest rate buy-down or are offered at a discount to market rates. The discounted rate is typically set at between four and five percent. Some states offer what they call a blended rate, in which state funds supplement and leverage private lending, increasing the reach and size of the loan programs. Massachusetts gives lower interest rate loans to families with lower incomes.

Table 3. Summary of Interest Rates in Selected States

State	Interest Rate or Other Loan Characteristics
Alaska	Buys down interest rates by 25 to 75 basis points.
Connecticut	Rates set at 1%, 3% or 6% depending on income, family size and location.
Idaho	4% fixed for term.
Louisiana	Louisiana's HELP program uses a blended rate through which the state subsidizes the first 50% of loan and the remaining 50% of the loan is set at the bank's rate. For example, a $12,000 loan might have a $6,000 subsidized interest rate at 2% and a non-subsidized rate at 8% for the remaining $6,000.
Massachusetts	Massachusetts offers a loan program that gives borrowers with incomes at less than 80% of the state median income a zero interest loan. The program provides an interest rate of 3% for those who are above that level. Rather than make the loans itself, the state uses private lenders to make the loans and reimburses them for the difference between the borrower's rate and prime plus 1%.
Montana	5% fixed for term.
Minnesota	4% fixed for term .
Ohio	An interest rate buydown program of up to 50% for the first five years of the loan.
New York	Interest rate buy-down of 4% or up to 6.5% buy-down in the ConEdison territory (New York City).

Term of the Loan

The term of most loans is typically between five and ten years.

Table 4. Summary of Loan Terms in Selected States

State	Maximum Term (in years)
Alaska[3]	15
Connecticut	10
Louisiana	5
Idaho	5 (Requires that for existing homes and business the savings from reduced energy usage must be great enough to offset the cost of the project within 15 years.)
Minnesota Rental Energy Loan Fund	1-5
Montana	10
New York	10
Ohio	Subsidy only provided for the 5 years of loan.
Pennsylvania	10

Eligibility Requirements and Security

Most states set out some kind of eligibility requirements so that they can screen applicants. Idaho requires a credit score of at least 620 and Pennsylvania's Keystone Home Energy Loan Program looks for a credit score of 630, although it will consider applicants that range as low as 620. Pennsylvania rejects approximately 25 percent of its loan applicants. Connecticut does a credit check on loan applicants and rejects between 40 and 50 percent of the applicants as a result of these credit checks. Montana contracts with a financial entity to gather credit information and all loan services. This company recommends loan approval or denial. Ohio leaves the credit evaluation procedure up to the participating bank lender.

Many states also require some type of security, typically in the form of a lien on the property. Alaska's Small Building Material Loan and its Energy Efficiency Rate Reduction Program both require a lien on the property, as do Connecticut, Idaho, Minnesota,[4] and Oregon. Montana generally uses the installed equipment as the security for the loan, and does not place a lien on the full property. Louisiana, Massachusetts and Ohio leave the decision about whether to place a lien on the property to the participating bank lender. In the case of Massachusetts about half of all loans involve a lien.

Pre-approved Uses of Funds

The state loan program define what kinds of energy efficiency products or technologies they will fund, generally laying out specific products but sometimes referencing other widely known and accepted programs like EPA's ENERGY STAR program.

The state loan program define what kinds of energy efficiency products or technologies they will fund, generally laying out specific products but sometimes referencing other widely known and accepted programs like EPA's ENERGY STAR program. Louisiana's Home Energy Loan Program (HELP) is an example of a program that references ENERGY STAR. 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 approves a similar list of equipment, and also requires that the equipment be ENERGY STAR-rated.

Connecticut specifies automatic set back thermostats, siding, caulking and weather-stripping, insulation, replacement heating systems, window replacement. Idaho includes water heaters, lighting and "other building improvements" in its list. In some cases states set out a more general mandate rather than specifying specific technologies. Alaska's program specifies that it will loan to "projects that improve the livability of a home, improve energy efficiency ... "[5]

Energy Audit Requirements

A home energy audit can identify specific measures that are appropriate to reduce energy consumption in a particular home, targeting specific applications of technologies, suggesting specific places that need sealing, new insulation or ventilation. New York requires an energy audit, and further requires that the auditor be certified by the Building Performance Institute, a national organization that certifies energy auditors.[6]

Table 5. Summary of Audit Requirements in Selected States

State	Audit Requirement
Connecticut, Montana and Pennsylvania	Do not require an audit
Louisiana	The HELP program requires an energy rating for the home and allows the homeowner to pick all the appliances, so long as the home passes the energy audit. Also allows the homeowner to not do an audit, but then the homeowner must pick from a prescribed list of items.
Massachusetts	Requires either a no-cost basic energy audit or will provide a blower door audit for additional cost.
New York	Energy audit required by an auditor certified by the Building Performance Institute.
Ohio	Energy audit required, using a home energy rating system.[7]

Sources of Funds Vary

States use a number of different sources to fund their energy efficiency programs, ranging from Petroleum Violation Escrow (PVE) funds to general obligation bonding to appropriations to public benefit funds. Montana uses environmental fines collected from companies with air quality violations to fund its program.

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Table 6. Summary of Sources of State Program Funds in Selected States

State	Source of Funds
California	Public benefit fund
Connecticut	Public benefit fund
Idaho	PVE funds
Massachusetts	Public benefit fund
Minnesota	PVE funds
Montana	Air quality fines collected by the state Department of Environmental Quality
New York	Public benefit fund
Ohio	Public benefit fund
Oregon	General Obligation Bonds
Pennsylvania	State Treasurer's Office for some programs and Sustainable Energy Funds (a variant on public benefit funds) for other programs.

Public benefit funds tend to yield the largest and most consistent funding for energy efficiency financing of any type. Public benefit funds (sometimes called system benefit funds or other similar names) are accumulations of funding that result from a small surcharge placed on consumers' energy bills. Currently 23 states and the District of Columbia[8] have some type of public benefit fund that supports energy efficiency. These vary in size; Rhode Island's fund is about $15 million per year while California's puts $280 million into energy efficiency per year. Funding levels typically are in mils per kilowatt hour. Connecticut's $87 million annual program has a 3 mil per kWh funding level. New York's $87 million program has a funding 1.02 mil per kWh funding level. In total, these funds represent approximately $1 billion dollars in annual funding for energy efficiency.

In some cases (Massachusetts, Maine, California, New Jersey and New York, for instance) state agencies administer the public benefit funds, in other cases (Connecticut, Rhode Island, New Hampshire, for example) the utility administers the program and in two other (Vermont and Oregon) cases a third party does so under a performance-based contract with the state.

PVE funds are available to states as a result of alleged oil company violations of Federal oil pricing controls in place from 1973 to 1981. These funds are almost totally expended, however a few states still have funds remaining and are using them to support various energy efficiency initiatives, such as the loan and grant programs discussed in this section.

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Programs Specific to Low-Income Families

As referenced in the discussion of New York, some states offer grant programs specifically to low-income families. These state funds supplement federal Weatherization Assistance Program funding for low-income families. Table 7 lists all state funding, as well as federal and utility weatherization funding. All states offer low-income energy efficiency grant programs funded by the federal Weatherization Assistance Program and 30 states and the District of Columbia also offer additional funds to supplement those services.

Grant and Rebate Programs

Twelve states also offer grant or rebate programs that support energy efficiency and are generally not income-contingent. Grant and rebate programs vary a great deal, but a descriptions of them can be divided into nine different parts: those programs designed specifically for low income families, a designation of who receives the money, designation of who qualifies for the grant or rebate, specification of the size of the grants or loans, designation of who is eligible to receive funding, whether an energy audit is required, how the funds are distributed and the source of funds.

Table 7. Weatherization Funds by State (FY 2005)

	Federal			State			Federal and State
State	DOE	LIHEAP Transfer	Total	PBF	Utility	Total	
Alabama	$2,767,449	$835,000	$3,602,449	$0	$0	$0	$3,602,449
Alaska	$1,813,767	$1,000,000	$2,813,767	$0	$0	$0	$2,813,767
Arizona	$1,138,751	$1,229,691	$2,368,442	$0	$869,861	$869,861	$3,238,303
Arkansas	$2,079,513	$1,906,358	$3,985,871	$0	$0	$0	$3,985,871
California	$6,322,844	$22,447,438	$28,770,282	$0	$99,056,964	$99,056,964	$127,827,246
Colorado	$5,504,036	$4,490,922	$9,994,958	$0	$2,700,000	$2,700,000	$12,694,958
Connecticut	$2,759,107	$0	$2,759,107	$7,273,399	$0	$7,273,399	$10,032,506
Delaware	$577,217	$400,000	$977,217	$0	$0	$0	$977,217
Dist. of Columbia	$749,216	$999,008	$1,748,224	$3,500,000	$0	$3,500,000	$5,248,224
Florida	$2,592,639	$3,859,747	$6,452,386	$0	$0	$0	$6,452,386
Georgia	$2,940,956	$2,677,363	$5,618,319	$0	$1,430,000	$1,430,000	$7,048,319
Hawaii	$204,993	$0	$204,993	$0	$0	$0	$204,993
Idaho	$1,942,077	$1,942,077	$3,884,154		$2,225,000	$2,225,000	$6,109,154
Illinois	$14,349,500	$16,313,465	$30,662,965	$4,844,753	$0	$4,844,753	$35,507,718
Indiana	$6,580,199	$4,740,931	$11,321,130	$0	$567,303	$567,303	$11,888,433
Iowa	$5,011,292	$5,184,900	$10,196,192	$0	$4,814,744	$4,814,744	$15,010,936
Kansas	$2,175,587	$2,256,022	$4,431,609	$0	$0	$0	$4,431,609
Kentucky	$4,548,384	$3,540,645	$8,089,029	$0	$361,418	$361,418	$8,450,447
Louisiana	$2,427,976	$1,151,986	$3,579,962	$0	$882,584	$882,584	$4,462,546
Maine	$3,081,589	$4,816,834	$7,898,423	$1,700,000	$0	$1,700,000	$9,598,423
Maryland	$2,992,926	$773,220	$3,766,146	$1,600,000	$716,885	$2,316,885	$6,083,031
Massachusetts	$6,968,249	$7,000,000	$13,968,249	$21,215,000	$0	$21,215,000	$35,183,249
Michigan	$15,257,442	$8,500,000	$23,757,442	$5,000,000	$0	$5,000,000	$28,757,442
Minnesota	$10,100,643	$6,149,575	$16,250,218	$0	$3,956,177	$3,956,177	$20,206,395
Mississippi	$1,655,581	$0	$1,655,581	$0	$0	$0	$1,655,581
Missouri	$6,029,907	$0	$6,029,907	$0	$500,000	$500,000	$6,529,907
Montana	$2,623,349	$2,695,829	$5,319,178	$1,274,371	$0	$1,274,371	$6,593,549
Nebraska	$2,501,138	$2,282,876	$4,784,014	$0	$0	$0	$4,784,014
Nevada	$925,040	$0	$925,040	$2,621,272	$1,454,000	$4,075,272	$5,000,312
N. Hampshire	$1,515,114	$500,000	$2,015,114	$953,398	$0	$953,398	$2,968,512
New Jersey	$5,125,246	$3,607,000	$8,732,246	$13,671,113	$0	$13,671,113	$22,403,359
New Mexico	$1,634,730	$1,488,000	$3,122,730	$0	$0	$0	$3,122,730
New York	$21,818,047	$32,241,788	$54,059,835	$3,660,426	$0	$3,660,426	$57,720,261
North Carolina	$4,176,834	$4,343,072	$8,519,906	$0	$0	$0	$8,519,906
North Dakota	$2,589,151	$2,107,079	$4,696,230	$0	$0	$0	$4,696,230
Ohio	$15,009,117	$16,917,856	$31,926,973	$6,976,875	$780,000	$7,756,875	$39,683,848
Oklahoma	$2,602,794	$1,081,926	$3,684,720	$0	$0	$0	$3,684,720
Oregon	$3,078,771	$3,437,911	$6,516,682	$8,900,000	$0	$8,900,000	$15,416,682
Pennsylvania	$14,772,357	$19,990,900	$34,763,257	$20,645,515	$0	$20,645,515	$55,408,772
Rhode Island	$1,161,108	$1,750,000	$2,911,108	$1,100,000	$0	$1,100,000	$4,011,108
South Carolina	$1,783,179	$1,802,597	$3,585,776	$0	$0	$0	$3,585,776
South Dakota	$1,925,053	$1,542,561	$3,467,614	$0	$0	$0	$3,467,614
Tennessee	$4,199,886	$2,151,351	$6,351,237	$0	$0	$0	$6,351,237
Texas	$5,599,993	$7,703,606	$13,303,599	$0	$2,098,850	$2,098,850	$15,402,449
Utah	$2,086,136	$2,309,000	$4,395,136	$0	$0	$0	$4,395,136
Vermont	$1,283,358	$0	$1,283,358	$2,100,000	$49,344	$2,149,344	$3,432,702
Virginia	$4,751,384	$5,445,547	$10,196,931	$0	$0	$0	$10,196,931
Washington	$4,642,533	$5,697,581	$10,340,114	$0	$5,452,255	$5,452,255	$15,792,369
West Virginia	$3,225,843	$2,519,804	$5,745,647	$0	$0	$0	$5,745,647
Wisconsin	$9,768,947	$11,196,390	$20,965,337	$41,484,767	$0	$41,484,767	$62,450,104
Wyoming	$1,179,511	$1,470,540	$2,650,051	$0	$0	$0	$2,650,051
Totals	**$232,550,459**	**$236,498,396**	**$469,048,855**	**$148,520,889**	**$127,915,385**	**$276,436,274**	**$745,485,129**

Qualified Measures for Grant or Rebate Programs

Every state specifies what equipment qualifies for a grant or rebate, and in most cases the list is fairly similar, with air conditioners, lighting, furnaces, washing machines, duct sealing, programmable thermostats and insulation appearing on almost every state's list of qualifying equipment.

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In many cases, grants or rebates are directly tied to an ENERGY STAR classification. The District of Columbia, for example, has this requirement for clothes washers and dryers, refrigerators and freezers and room air conditioners. Maine's rebate for certain lighting fixtures is tied to ENERGY STAR rating. Rhode Island's ENERGY STAR Rebate Program focuses on furnaces, boilers and ENERGY STAR programmable thermostats. Clothes washers need to qualify for the ENERGY STAR rating if they are to get the Vermont rebate. Wisconsin's ENERGY STAR Products Cash-Back rewards program offers rebates for dishwashers, refrigerators/freezers, dehumidifiers, lighting and clothes washers that comply with ENERGY STAR.

Table 8. Summary of Qualified Measures in Selected States

State	Products
Delaware	Focuses on energy efficient products: clothes washers/dryers, refrigerators and freezers, air conditioners, programmable thermostats
District of Columbia	Products include air conditioners, refrigerators, and washing machines. All must be ENERGY STAR-RATED.
Illinois	Refrigerators/freezers, water heaters, lighting, furnaces, boilers, duct/air sealing, building insulation, windows.
New York	Clothes washers/dryers, dishwashers, refrigerator/freezers, dehumidifiers, ceiling fans, water heaters, lighting furnaces, heat pumps, duct/air sealing, building insulation.
Oregon	Equipment insulation, programmable thermostats, caulking/weather stripping, duct/air sealing, building insulation, widows, doors.
Rhode Island	Furnaces, boilers, programmable thermostats.
Vermont	ENERGY STAR-RATED clothes washers, lighting and furnaces.
Wisconsin	One incentive program for heating and cooling and another for appliances. Heating and cooling equipment is based on pre-qualified equipment. Appliances (dishwashers, refrigerator/freezers, dehumidifiers, lighting and clothes washers) must be ENERGY STAR-RATED.

Scale of Grant and Loan Subsidies

This is a difficult piece of the puzzle for states. It is easy to spend too much, to offer too large an incentive, and equally easy to offer too low an incentive such that it has no effect on the buyer's decision.

Table 9. Summary of Program Incentive Level in Selected States

State	Incentive Level
District of Columbia	Room air conditioner: $50, fridge: $100, washing machines $150
Delaware	Refrigerators: $100, Freezers $50, Electric water heaters $25, central a/c $350
Illinois	Varies.[9]
Louisiana	Up to 20% of costs of measures to improve efficiency (as determined by an audit), capped at $2,000.
Maine	$2 off CFLs and $12 off other ENERGY STAR lighting fixtures
New Jersey	Central air conditioning: $300-$400 depending on efficiency; heat pumps at $350-$450 depending on efficiency
New York	The Assisted Home Performance Grants program offers grants that cover up to 50% of the cost of energy efficiency upgrades, with a max of $5,000 per single family home and $10,000 for 2-4 family units. The Assisted Multifamily Program offers up to $500 "gap" funding to customers whose income is less than 80% of the state median income. It is designed to meet the needs of energy efficiency projects when other sources of funding cannot do so.
Oregon	25% of the total cost of upgrades up to a total cost of $500 per household.
Rhode Island	Rebates of $200 for efficient furnaces and $25 for ENERGY STAR programmable thermostats.
Vermont	Rebates (through coupons) of $1.50 per CFL bulb, $10 per torchiere, as well as $50 for ENERGY STAR clothes washers and $100 for ENERGY STAR furnaces.
Wisconsin	Partial List: Refrigerators: $50; dishwashers: $30; light bulbs: $2; torchieres and ceiling fans: $15; central air conditioners: $100-$200; furnaces: $150.

Eligibility Requirements

Compared to loan programs, grant and rebate programs tend to be more flexible and open to most families. The District of Columbia, Louisiana, Maine, Oregon, Rhode Island, Vermont and Wisconsin, for instance, do not make any distinction based on income or other criteria to determine who is eligible to receive grants and rebates. Illinois' Energy Efficient Affordable Housing Construction Program is available to non-profit housing developers. New York is a bit different. It provides a coordinated menu of several programs. Assisted Home Performance Grants are designed for families is 80 percent or less than the median income in the state and its EmPower program is designed for families with a household income that is below 60 percent of the state median income or who participate in a utility payment assistance program.

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Designation of Who Receives Funding

State programs designate who actually receives funding. In some cases the state gives the rebate directly to the homeowner, trying to influence retail consumers' decisions. In some cases states give it to contractors, distributors or manufacturers, thus trying to influence the decisions at the wholesale, distributor or manufacturer level.

Table 10. Summary of Grant or Rebate Program Recipients in Selected States

State	Grant or Rebate Recipient
Delaware	Grant/rebate offered directly to homeowner
Illinois	Offers its grants directly to Illinois-based non-profit housing developers for use in rehabilitation or construction of affordable housing units.
New York	Provides incentives to lighting contractors, distributors, manufacturers and designers – not to the multi-family residence or business where the equipment is being installed.
Oregon	Grant/rebate offered directly to homeowner.

Energy Audit Requirements

Like loan programs, some grant programs require an energy audit. These energy audits are less common requirements than for the loan programs, however.

Like loan programs, some grant programs require an energy audit. These energy audits are less common requirements than for the loan programs, however. An energy audit is an integral part of the Louisiana Home Energy Rebate Option (HERO) program, since the amount of incentive is based on the energy rater's calculation of energy savings; existing homes must improve their energy efficiency by at least 30 percent to be eligible for the rebate. New York's Assisted Multifamily Program requires and provides energy audits. Oregon's State Home Oil Weatherization (SHOW) program pays for an energy audit. It then asks homeowners to fill out (on their own or with a certified contractor) an Energy Audit Checklist and to turn that form in along with receipts when they request the rebate. Wisconsin's approach is different; the state's Home Performance with ENERGY STAR program uses its grant funds to pay for home energy audits and then provides the cash incentives for installing the efficiency measures based on the recommendations in the audit.

Distribution of Rebates

This factor is important—ease of distribution of money, especially for small purchases will determine if people really use the incentive. An incentive that is too difficult to take advantage of will not be used.

Table 11. Summary of Requirements for Distributing Funds in Selected States

State	Means of Distributing Funds
District of Columbia	D.C. residents submit proof of purchase and residency to the D.C. Energy Office.
Delaware	Grant funds distributed through the Energy Office. Homeowners contact Energy Office to reserve the grant before purchasing equipment, or apply for the grant after purchase.
Illinois	Grants for the Energy Efficient Affordable Housing Construction Program given directly to non-profit housing developers.
Louisiana	The Louisiana Department of Natural Resources issues a rebate based on (1) an initial energy rating and (2) a subsequent verification by the home energy rater that the efficiency improvements have been installed.
Maine	Coupons are available in the store at participating retailers; retailers are later reimbursed by Efficiency Maine
New Jersey	Incentives offered through the utilities.
New York	*Assisted Home Performance Grants*: Application done through a community organization or through a Building Performance Institute certified contractor. *Small Commercial Lighting Incentives Program*: Incentives given directly to lighting contractors, distributors, manufacturers and designers. *Energy Smart New Construction Program*: grant given through a competitive application process run by the state energy office. Both of these programs focus on commercial and industrial customers, plus multi-family residential.
Oregon	Multifamily Home Energy Savings Program: The Energy Trust of Oregon distributes funding directly to the owner of multifamily properties (property with five or more units). State Home Oil Weatherization program: Mail-in rebates processed by Oregon Department of Energy.
Rhode Island	State distributes the rebate once the customer submits receipts, proof of building permit and proof of the efficiency of the new furnace.
Vermont	Coupons redeemable at retail stores that are either available at the store or that can be printed on the Efficiency Vermont website.

Tax Incentive Programs

Nine states plus the District of Columbia use tax incentives as a further measure to encourage energy efficiency in residences. Tax incentives laws specify who is eligible for the incentive, whether the incentive is a deduction or credit, and which specific measures qualify for the tax incentive. Typical incentives specify certain measures or technologies that qualify.

Nine states plus the District of Columbia use tax incentives as a further measure to encourage energy efficiency in residences.

Table 12. Summary of Tax Incentive Programs in Selected States

State	Qualifying Measures or Technologies
California	Lighting, chillers, furnaces, boilers, heat pumps, Air conditioners, Caulking, weather-stripping, duct/air sealing, building insulation, windows, advanced electric metering
District of Columbia	Equipment that can qualify includes (but not limited to) clothes washers, lighting, water heaters, duct and air sealing, insulation, windows, doors, and roofs. All equipment must meet applicable ENERGY STAR standards.
Idaho	Caulking/weather stripping, building insulation, windows and doors.
Montana	Water heaters, chillers, furnaces, boilers, heat pumps, a/c, programmable thermostats, caulking/weather-stripping, building insulation, windows and doors.
Oregon	Refrigerator/freezers, clothes washers and dishwashers that qualify for the credit. Oregon's standards are more stringent than those of the federal government's ENERGY STAR program, so not all ENERGY STAR-RATED appliances will qualify for the Oregon incentive.[10]

Some states offer a tax incentive for purchase of a new home if it meets a certain efficiency level.

Table 13. Summary of New Home Purchase Tax Incentive Programs in Selected States

State	Energy Efficiency New Home Tax Incentive
Arizona	5% credit up to $5,000 for new homes 50% more efficient than the 1995 Model Energy Code. Average savings is $190 for a home
District of Columbia	5% credit up to $2,000 if home is 50% more efficient than the 1995 Model Energy Code
Oklahoma	$4,000 tax credit to contractors who build new energy efficient homes that are at least 40% below the International Energy Conservation Code (IECC), and a $2,000 credit to those contractors who build homes that are between 20% and 39% better than the IECC

Credit or deductions levels vary from one state to another, but in most cases the tax incentive is based on the cost of equipment such as lighting, water heating, cooling, insulation or other equipment.

Credit or deductions levels vary from one state to another; in one case the deduction is for the interest on a loan for energy efficiency, but in most cases the tax incentive is based on the cost of equipment such as lighting, water heating, cooling, insulation or other equipment, listed below.

Table 14. Summary of Tax Credit Deduction Levels for Selected States

State	Tax Credit or Deduction Level
California	Personal tax deduction of 100% of the interest on a loan to buy energy efficient equipment or materials if the loan is from a publicly owned utility company (such as the Los Angeles Department of Water and Power or the Sacramento Municipal Utility District).
District of Columbia	10% of expenses for lighting controls and programmable thermostats, to 20% of expenses for water, heating, cooling systems and insulation of water heating and existing duct work, to 25% of expenses for double pane windows, caulking for windows, 20% for insulation of walls, floors and ceiling, major home appliances. Limited to $500 for renovations per year and at $2,000 for new homes.
Idaho	100% tax deduction including costs of material and labor; applies only to homes built before 1976.
Montana	Credit is set at 25% of the cost of the capital investment and capped at $500 per taxpayer.
Oklahoma	$4,000 per new home that is less than 2,000 s.f. and constructed at 40% better than the IECC and $2,000 for homes less than 2,000 s.f., constructed at 20%-39% better than IECC.
Oregon	Incentives range from $50-$180 per appliance

Next Steps

One program that is missing from the mix of state energy efficiency, grant and loan programs is an energy efficiency mortgage program. States have traditionally deferred to programs established by Fannie Mae, U.S. Department of Housing and Urban Development and the Veterans Affairs to take the lead on offering this product to the general public. In practice that effort has resulted in few loans being made for many reasons including a lack of a systematic marketing and outreach effort. The programs discussed in this Issue Brief could form the basis for supporting the developing of state-sponsored energy efficiency mortgage loan program, in partnership with the federal government, banking and real estate communities that could build on the lessons learned from the Fannie Mae, HUD and VA programs.

States have traditionally deferred to energy efficiency mortgage programs established by Fannie Mae, U.S. Department of Housing and Urban Development and the Veterans Affairs to take the lead on offering this product to the general public.

Activities in support of this effort include:

- A pilot energy efficiency mortgage demonstration project is being developed with the participation of the state energy, housing insurance, and other agencies in the states of **MA?** New Jersey, New York and Pennsylvania. The project is designed to be a model for all states and will include similar audit, income qualifying ratios and other factors to make the product more acceptable to lending and investment communities. The pilot states are considering various subsidy options, including interest-rate buy downs and the use of tax-exempt bonds to help increase the attractiveness of the product. In addition, for those with low-and-moderate incomes, the states are also considering strategies to incorporate weatherization and other energy efficiency grant subsidies. A marketing campaign is being developed to increase its visibility once it is ready to launch.

An expanded network of nonprofits will be supported through loan brokering activity to reach low income, minority and rural homeowners currently captured by predatory lenders.

- A pilot mortgage brokerage company is being established by Action Energy (Gloucester, Massachusetts) and the Massachusetts Affordable Housing Alliance (Dorchester) with funding from the Ford Foundation and other agencies, to directly market energy efficient mortgages to low-and-moderate income households in the Greater Boston and eastern Massachusetts areas.

- A combined energy audit and whole home rehabilitation inspection protocol is being designed that will meet government, banking *and investment* requirements

- An expanded network of nonprofits will be supported through loan brokering activity to reach low income, minority and rural homeowners currently captured by predatory lenders. The revenue from the loan brokering activity will be shared with referral nonprofits, including weatherization providers, loan counseling organizations and state supported second mortgage and deferred loan program providers. These networks become self-sustaining and result in a bulwark against predatory lending activity. In all participating states, qualified nonprofits have been identified to pilot the launch of this product in conjunction with approved lenders.

- A national advisory committee is being established and will be made up of state energy, treasury, housing finance officials along with utility, finance and housing officials.

- State-level working groups have been set up in Massachusetts, New Jersey, New York and Pennsylvania to guide the implementation of the product. Members of the working groups include senior-level housing finance, energy and treasury officials. Six meetings were held in 2006, including a regional meeting on December 1 in New York City. Key topics have included developing a common audit tool, working with Fannie Mae to develop a usable secondary market product including loan sale by State Housing Finance Agencies, identifying regional and local lenders who could participate in the program, appropriate state subsidies and potential nonprofit pilot program sites.

Endnotes

1. Petroleum violation escrow (PVE) funds are also known as oil overcharge funds. They come from fines paid by oil companies in violation of the federal oil price caps in place from 1973-1981. More than $4 billion of these PVE funds have been disbursed to state energy offices. These funds are, however, diminishing rapidly and are no longer a long-term source of funding for state-administered energy programs.

2. A multi-family building is typically a building with more than four units.

3. Alaska's Small Building Material Loan and the Association Loan Program.

4. Lien applies for loans of greater than $5,000.

5. Alaska Small Building Material Loan through AK Housing Finance Corporation

6. For more information on the Building Performance Institute see http://www.bpi.org/.

7. 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.

8. The states are Arizona, California, Connecticut, Delaware, District of Columbia, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Vermont, Wisconsin.

9. Illinois Energy Efficient Affordable Housing Construction Program:

- Rehab: multi and single family: $2,500/unit, single room occupancy, <80 units: $2.75/sqft of living space and single room occupancy, >80 units: $2.50/sqft of living space
- New Multi-Family: 80 units or less: $2.50/sqft of living space, more than 80 units: $2.25/sqft of living space
- New Single Family: single family: $2,000/unit, duplex: $3,500/duplex and 3-flat: $4,500/building

10. Refrigerators-freezers qualifying for an Oregon Residential Energy Tax Credit must have at least 20 percent lower energy consumption than allowed by the July 1, 2001 U.S. DOE standards for refrigerators. The federal ENERGY STAR program is adjusting its efficiency specification upward to a level matching Oregon's minimum requirements so that all refrigerator-freezers that qualify for Oregon's tax credit will also be ENERGY STAR refrigerator-freezers. However, it is important to note that the ENERGY STAR program continues to include more classes of refrigerators, refrigerator-freezers and freezers that are not included in Oregon's tax credit program. The bottom line: While all Oregon tax credit-eligible refrigerator-freezers will be ENERGY STAR, not every ENERGY STAR product will qualify for an Oregon tax credit. Oregon tax credits are available only for refrigerator-freezers with fully automatic defrost cycles, and with net refrigerated volumes between 12 and 30 cubic feet.

Clothes washers: The Oregon tax credit minimum qualifying Modified Energy Factor (MEF) is 1.6. Oregon's maximum Water Factor (WF) requirement is 8.5 gal/cu ft/cycle. The federal ENERGY STAR program has no Water Factor maximums. Therefore, it remains possible that some ENERGY STAR models may not qualify for tax credits in Oregon.

Dishwashers: Dishwashers qualifying for an Oregon Residential Energy Tax Credit must have an energy factor of 0.61 cycles/kWh or higher. Also, qualifying dishwashers must have a maximum water use per cycle, as tested, of 6.5 gallons. (http://egov.oregon.gov/ENERGY/CONS/RES/tax/appliances.shtml)

THE ENERGY PROGRAMS CONSORTIUM (EPC)
ENERGY EFFICIENCY MORTGAGE PROGRAM STATE WORKING GROUP

The purpose of the Working Group is to develop a new state-sponsored energy efficient mortgage product that will allow families to borrow additional amounts to pay for cost-effective energy efficiency improvements not covered by grants, and, in some cases, also allow them to "stretch" the income qualifying ratio allowing families to use the utility savings to qualify for additional borrowing. These mortgages can also play a significant role in helping to reduce the nation's carbon emissions from home energy use, as well as increase the affordability of home ownership for low-and-moderate income households.

The Working Group was established as a result of the lessons learned from the Weatherization, Rehab and Asset Preservation Partnership (WRAP), a five-year demonstration program funded by the Ford Foundation and state agencies and local and regional foundations, to develop new strategies to sustain low-and-moderate income home ownership. One of the key lessons learned from the WRAP pilot programs is that many of these families are burdened by high interest rate mortgages and energy bills and there is no readily available mortgage product that can help them refinance their mortgage and integrate energy efficiency and other improvement that can help to increase the overall affordability of their home.

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