

FINANCING LOW-INCOME ENERGY EFFICIENCY IN A COMPETITIVE ELECTRIC INDUSTRY

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SYNOPSIS

The time has come for utilities to take a new look at how they deliver energy efficiency to low-income households. Given the advent of competition in the electric industry, it is now necessary for utilities to: (1) create new and innovative partnerships through which to deliver energy efficiency; (2) target their energy efficiency programs to households who can help lower utility expenses; and (3) target their programs to help promote long-term stable homeownership (to the benefit of both the consumer and the company). Implementation of the suggestions below will help chart a new course that will benefit the utility, its customers, and its community.

INTRODUCTION

While the utility provision of energy efficiency measures has evolved into a multibillion dollar investment, many would argue that, faced with increased competitive pressure and, particularly in the aftermath of restructuring, utility financial support for making such investments will fall sharply. In its place, it is argued a competitive market in energy services will emerge.

Policymakers and utilities, however, should worry that a competitive market will *not* adequately support an appropriate supply of energy efficiency investments for low-income households and that, as a result, continuing involvement by utilities in the provision of low-income energy efficiency is needed.

This is not to say that the introduction of competition into the electric industry should have *no* impact on the delivery of low-income energy efficiency. It *is* to say that there must be new institutions to effect such delivery. The analysis below will identify and help bring about those new institutions that are necessary to promote low-income energy efficiency in a competitive electric industry.

The issue, in other words, is what types of new institutions might be developed that will take into account the need for public utilities to deliver low-income energy efficiency without harming their competitive position while at the same time ensuring that low-income energy efficiency is, in fact, delivered. Moreover, these new institutions are needed so that utility activity with regard to low-income energy efficiency is not a subsidized utility direct investment program, but rather a program of efforts to help "the market" serve those sectors of the low-income population which the market is capable of serving.

LOW-INCOME ENERGY EFFICIENCY IN A COMPETITIVE ENVIRONMENT

Utility-funded low-income energy efficiency is particularly important as utilities enter a competitive environment. Competition in the electric industry need not be the end of low-income energy efficiency.

At most, the impact that competition in the electric industry should have on low-income energy efficiency should be to force utilities into joint ventures rather than having utilities "go it alone" in the provision of such measures. As discussed in detail below, joint ventures with agencies such as housing developers, banks that provide financing for affordable housing development, and local governments will provide substantial benefits to low-income energy efficiency programs.

By pursuing joint ventures with these various institutions, a utility will increase its cost-effectiveness by "piggybacking" its program on the administrative efforts of others; will increase its cost-effectiveness by avoiding the need to fully fund the entire cost of all low-income energy efficiency improvements itself; will increase its cost-effectiveness by identifying and serving the needs of those populations most likely to be able to deliver cost control and revenue stabilization benefits; and will increase its cost-effectiveness by taking care of non energy savings repairs through related programs with whom the energy efficiency is partnered.

In addition, energy efficiency delivered through such joint ventures should generate substantial benefits to not-for-profit housing developers, managers and owners. Illustrative of the institutional advantages to these potential utility partners, in their capacity as developers/managers/owners of housing, are the following:

1. **Borrow more:** Installation of energy efficiency improvements in a particular housing development will allow the developer to increase their leveraging. To the extent that financiers consider long-term operating costs in their calculation of the financial feasibility of a project, reduced energy expenditures will have a positive impact on the perception of project viability.
2. **Generate dollars for additional amenities:** Amenities are one of the primary selling points of new low-income properties. Given tight budgets and the lack of sufficient capital, however, many --perhaps most-- low-income housing is developed with few amenities. CDBG dollars, for example, are a scarce resource. To the extent that capital is freed up for the developer because of energy efficiency improvements, two impacts might arise. On the one hand, those scarce CDBG dollars could be used to finance additional low-income housing. On the other hand, those scarce CDBG dollars could be used to fund additional amenities in the housing that is already being assisted. It is likely that the latter will occur.
3. **Reduced vacancy losses:** Expensive to heat apartments impose unique costs on housing owners, developers and managers. Expensive to heat apartments have high vacancy rates. It is not uncommon, for example, for households to live in an apartment during the winter months, only to move when winter-incurred arrearages come due in the spring. Making these apartments *less* expensive to heat thus makes them more attractive and less subject to vacancy. The reduction in vacancies results in reduced cash losses to owners/managers due to

vacancies.

Finally, energy efficiency should generate substantial benefits to the financiers of affordable housing development as well. Energy efficiency improvements in low- and moderate-income housing will significantly reduce the cost of housing, improve the overall affordability of the units being developed, enhance the creditworthiness of the households who are responsible for repayment of loans, and thus reduce the risk associated with the overall mortgage. Indeed, these results arise even when the capital cost is increased due to the need to finance some increment of the energy efficiency improvement not covered by the utility contribution.

These conclusions are based on a recent study by FSC on the impacts of energy efficiency investments on the affordability of housing within the context of first time homeowner programs. That study found that the benefits which arise from the installation of energy efficiency measures can be equated to other means of reducing housing costs to participants in low- and moderate-income housing programs. Depending on the geographic region of the country, energy efficiency measures will have the same effect as reducing the initial purchase price of the home by 1.5 to nearly eight percent. Similarly, again depending on the geographic region of the country, energy efficiency measures will have the same effect as reducing the interest rate on the mortgage by 11 to 60 basis points. What this means, in other words, is that to generate the same life-cycle savings as the installation of energy efficiency measures, a household who is paying 9.5 percent interest would need to obtain a mortgage at 8.9 percent interest instead. Finally, to generate the same life-cycle savings as the installation of energy efficiency measures, a household who is purchasing a home for \$30,000 would need to obtain a discount on that purchase price to \$27,600.

Lost Opportunities: "The Shame of it All"

Despite the widespread advantages, the provision of low-income energy efficiency is marked by lost opportunities. Lost opportunities arise when the accomplishment of some given task precludes the future accomplishment of additional work at that same dwelling. Some of the lost opportunities involved with existing programs include:

- o **Missed transactions:** Certain transactions lead residential customers generally, or low-income residential customers in particular, to focus their attention on housing costs. The purchase or refinancing of a home, for example, is one such transaction. If that attention can be harnessed at the time it is focused on the home, the likelihood of making energy efficiency improvements increases. If, however, the purchase or refinancing transaction passes by, it is not likely that it will be easy, or even possible, to direct future attention to energy efficiency matters, particularly if the energy efficiency would require some type of debt financing.
- o **Low-income housing developments:** Decisions made by low-income housing developers represent decisions that will hold for the useful life of the measures. Accordingly, if a developer installs a relatively inefficient furnace or hot water heater, or fails to install the most cost-effective level of insulation, it is not likely that a utility will be justified to soon revisit that

home to install more energy efficient measures. The opportunity to install high efficiency measures is lost at the time of the developer's initial decision.

THE NEXT STEPS FOR A COMPETITIVE UTILITY

Given the discussion above, in response to the increasing competition in the electric industry, rather than abandoning their low-income energy efficiency altogether, utilities should undertake a top-to-bottom review. Such a review would benefit the utility which sponsors it, the low-income community which is the subject of it, and the affordable housing developers and financiers which are the focus of it. The recommended energy efficiency review would undertake to generate four deliverables for the sponsoring utility:

1. An inventory of lost opportunities. This would include a review of affordable housing development (through, for example, the federal HOME program, the federal Low-Income Housing Tax Credit, and the like), a review of state CRA programs by banks, a review of first time homeownership programs (through Mortgage Revenue Bonds, and the like), and others.
2. An inventory of utility partnership potentials. These would include working through state and local Housing Finance Agencies, state and local Land Trusts, developing financing through Community Development Financial Institutions, and the like. An illustrative analysis of the places to begin searching for such partnerships is set forth in Appendix A to this proposal.
3. A report containing specific proposals on the various mechanisms through which a utility can invest in low-income energy efficiency without engaging in a 100 percent direct investment program. Consider, for example, the various proposals set forth in Appendix B to this proposal.
4. The preparation of illustrative "protocols" for locally appropriate utility/non-utility low-income energy efficiency partnerships. These protocols would include the types of measures to be delivered, the ways in which the partners might contribute to the funding of the measures, the points of intervention at which time the energy efficiency should be introduced into the process, and the like. These protocols would, in other words, synthesize the results of steps 1 - 3 into specific proposals.

The recommended utility review of low-income energy efficiency measures can directly lead to the commitment of millions of dollars of investment in low-income energy efficiency through utility/non-utility partnerships. Examples of the levels of commitment of non-utility dollars are set forth in Appendix C.

APPENDIX A: POTENTIAL UTILITY/NON-UTILITY PARTNERSHIPS

Federal Programs

The number of units of low- and moderate-income housing, the affordability of which might be improved by utility-sponsored energy efficiency investments, would represent a significant addition to the number of low- and moderate-income households reached by utility-sponsored energy efficiency programs. Consider that from the federal government alone:¹¹

1. HUD's *National Homeownership Strategy* is aiming to increase the national number of homeowners by seven (7) million by the year 2000. The HUD *Strategy* is intended to rely on public/private partnerships. While strategy sessions for increasing homeownership have included HUD, RHCEDS, FNMA and the Federal Housing Finance Board (FHFB), no utility, regulator or other entity representing utility- or government-sponsored energy efficiency programs have been included.
2. HUD's inventory of *foreclosed multifamily properties* is a second area where utilities might have access to targeting low-income assistance. HUD's inventory of foreclosed multifamily properties is substantial. The inventory grew from 10,000 units in 1990 to 27,000 units in 1992. By the beginning of Fiscal Year 1993, HUD initiated foreclosure on another 42,000 units, resulting in a total inventory of more than 69,000 units that are either HUD-owned or under foreclosure. Of these 69,300 units, at 441 properties, the law requires that roughly 31,200 be preserved as affordable low-income units. Similar properties are available through RHCEDS.
3. HUD's inventory of *foreclosed single family homes* is another source of housing to which utility energy efficiency efforts might be targeted. As of the summer of 1994, HUD had roughly 30,000 foreclosed single family homes for sale. Similar foreclosed properties are available through RHCEDS.
4. The Resolution Trust Corporation (RTC) reports that it has sold "thousands of housing units" through the *RTC's Affordable Housing Disposition* (AHD) program. The RTC, which takes over failed savings and loan institutions and disposes of their assets, had sold 575 multifamily properties, comprising more than 53,000 units through the AHD program as of December 1993. Of these, more than 22,000 units have been maintained as "permanently affordable."
5. The Resolution Trust Corporation, through its AHD program, has also sold about 20,000 *single family homes*. According to the RTC, the average sales price has been about \$18,000 and the average buyer income has been about \$21,800.

¹¹ This list is intended to be illustrative and not comprehensive.

6. HUD's inventory of *Expiring Use Properties* is a source of housing that would benefit from targeted utility energy efficiency programs. These units were constructed or substantially rehabilitated in the late 1960's and early 1970s, with federally- or state-subsidized mortgages that could be prepaid after 20 years. With mortgage prepayment, restrictions requiring that the housing be devoted to low and moderate income families would be lifted and the housing could be transferred to market rate use. According to official HUD estimates, the inventory of federally-insured prepayment-eligible housing includes some 360,000 units in 3,200 projects nationwide. While not all projects that are legally eligible to prepay are likely to do so, an economic model developed by the National Low Income Housing Preservation Commission predicts that 243,000 units, or two-thirds of the federally-insured prepayment-eligible housing stock, will be at risk over the next ten years.¹²¹ In addition, there are some 282,000 Section 8 Loan Management Set-Aside units whose contracts will expire over the next ten years.
7. In FY 1994, alone, HUD devoted a total of \$200 million to its *Vacancy Reduction Program* for public housing authorities. The grants awarded by HUD to local housing authorities --23 in all in 1994-- ranged from \$30 million to the Chicago Housing Authority to \$50,000 for the Ann Arbor (Michigan) Housing Authority. These HUD grants are intended to help local housing authorities repair approximately 20,000 vacant public housing units, and address other problems that result in unit vacancies.¹³¹
8. *Section 8 Multifamily Needs Assessments*, as required by federal law, will help identify low-income rental housing owners and managers with whom utilities can work. Under the Housing and Community Development Act of 1992, owners of older, assisted multifamily properties are required to submit comprehensive needs assessments to HUD. Each assessment, which is to be prepared by an entity independent of the owner, must contain a description of the current and future financial or other assistance needed to ensure that the property is well maintained and financially viable. The assessment must also describe any resources available for meeting the current and future needs of the property and the likelihood of obtaining these resources. HUD provides Section 8 rental assistance to roughly 20,000 privately owned properties. The mortgages for about 10,000 of these properties are also insured or held by HUD.
9. *Community Development Block Grant* funds are routinely used by local communities to build and rehabilitate low- and moderate-income housing. According to one report by the National Association of Housing and Redevelopment Officials (NAHRO), roughly 31 percent of all

¹²¹ The majority of expiring use projects and units are concentrated in ten states (Massachusetts, California, Texas, New York, Illinois, Ohio, and Michigan).

¹³¹ Vacancy reduction grants are targeted to local housing authorities that: (1) have vacancy rates of more than double the national average (roughly eight percent for public housing), or (2) are designated as troubled agencies, or (3) are in receivership.

CDBG funds requested in small cities were for housing development and housing rehabilitation projects. Similarly, large cities reported requests for housing and rehabilitation projects in 1991 representing more than 50 percent of the cost of all funding proposals submitted. "Overall," NAHRO found, "housing-related activities occupied the lion's share of funding requests in 1991, representing 44 percent of total requests" for CDBG funds. Between 1982 and 1988, forty-eight states (all but Hawaii and New York) administered roughly \$7 billion in CDBG funds.

10. One of the primary housing development, and homeownership, programs by the federal government is the *Home Investment Partnerships Program (HOME)*. Created in 1990, the HOME program is a federal housing block grant, which provides funds to states and localities to undertake flexible, wide-ranging housing activities through partnerships among states, localities, private industry and non-profit corporations. Funds are distributed using a needs-based formula, and activities are targeted at a minimum to those with incomes below 80 percent of area median income. Through May 1993, nearly \$190 million in HOME funds had been awarded to the states, assisting more than 13,000 affordable housing units.
11. Federal *Low-Income Housing Tax Credits* are also used to help finance the construction or rehabilitation of affordable housing throughout the country. First created by the Tax Reform Act of 1986, the Tax Credit requires that housing be geared to incomes at 50 or 60 percent of area median income. In 1993, the total tax credits available for allocation was \$546 million, \$425 million (78%) of which was actually allocated for low-income housing projects. From 1987 through 1992, states placed more than 267,000 total units in service using low-income housing tax credits.

Local, State and Private Programs

In addition to these federal efforts, much *non*-federal housing development work occurs through state and local institutions, both public and private. Consider that:

1. Local *Community Development Loan Funds* finance significant housing development. By 1993, 41 CDLFs existed in the country, with a total capitalization of \$100.1 million. These institutions provided roughly \$450 million in loans from 1986 through 1992, 44 percent of which went for affordable housing development. From 1986 through 1992, CDLFs financed 18,476 housing units, 86 percent of which were "permanently affordable" and 87 percent of which were affordable to low-income tenants. Each year, CDLF investments have grown, from \$20 million in 1986 to \$120 million in 1992. Moreover, CDLF lending from 1986 through 1992 leveraged an additional \$1,678 million in funds, a 14:1 leveraging ratio.
2. State *Housing Trust Funds* represent permanent capital pools that offer a continuing source of financial assistance to support the creation and preservation of affordable housing. As of 1993,

37 states and the District of Columbia had housing trust funds. One estimate is that these funds have collectively provided more than \$780 million in funding for 80,000 housing units, and have leveraged more than \$2.25 billion in funding from other sources.¹⁴⁾ Generally, state housing trust funds function as revolving loan funds, making loans and recycling loan repayments to make additional loans.

In general, state activity in the provision of affordable housing has been dramatic. Before 1980, only 44 state-funded housing programs existed. From 1980 to 1987, however, an additional 112 programs were created and from 1988 through early 1990, an additional 65 programs were developed. Most of these programs are for special needs populations, or involve new construction and substantial rehabilitation. A growing number of homeowner assistance programs are being created.

In addition to these figures are the thousands of units of affordable housing being constructed or rehabilitated each year through non-profit housing developers not included within the programs listed above.

First Time Homeowners Programs

First time homeowner programs can be divided into two types: (1) those run by government; and (2) those run by private institutions. Each will be considered separately.¹⁵⁾

State Government Homeownership Programs

State Housing Finance Agencies (HFAs) provide considerable assistance in promoting first time homeownership. By 1991, of the 600 affordable housing programs operated by HFAs around the country, 225 were homeownership programs. According to the National Council of State Housing Agencies:

The Mortgage Revenue Bond (MRB) Program is the primary homeownership program operated by State HFAs. Under this federally authorized program, HFAs issue tax-exempt bonds and use the proceedings raised from investors to fund mortgages through private lenders to lower income, first-time homebuyers purchasing modest-priced houses. MRB loans are made at interest rates as much as 2.5 percentage points below conventional rates. That means savings of as much as \$100

¹⁴⁾ Given that 14 of the 35 trust funds had been created in the three years preceding 1993, it is likely that the rate of investment, as well as the rate and amount of leveraged funds, will increase at a much quicker rate.

¹⁵⁾ Clearly, this discussion is not intended to be a comprehensive review of such programs. It is instead intended to provide a sufficiently complete list to allow public and private managers of energy efficiency programs to gain an idea of the genres of programs to which an energy efficiency component might be attached.

per month on a typical MRB mortgage.

In general, MRB borrowers may not have incomes higher than 100% or 115% of the area or state median household income, whichever is greater. The average MRB loan goes to buyers at or below 80% of the national median income. In addition, MRB loans may only be used to buy homes costing no more than 90% of the average area purchase price.

The Council reports that from the program's inception through 1992, state HFAs had assisted more than 1.6 million lower income American homebuyers through the MRB Program. More specifically:

In 1990, State HFAs made more than 131,000 MRB loans to borrowers with an average income of \$28,568, approximately 80% of the national median family income of \$35,700. The level was well below the average income of \$44,500 for homebuyers with conventional mortgages purchasing their first home and the average income of \$53,000 for all conventional buyers. In 1990, MRB borrowers bought homes costing an average \$59,705 -- far less than the average sales price of \$111,100 for conventional first-time home purchases and the average sales price of \$144,100 for all conventional home purchases.

States operate other first-time homebuyer programs as well. One of the most prevalent is the "mortgage credit certificates" program, which provides a federal income tax credit to qualifying first-time buyers. Fewer states, but still a substantial number, provide assistance on downpayments and closing costs. Examples of these programs include:

- o Alabama's "Down Payment Assistance Program," which provides a non-interest bearing second mortgage for up to 50 percent of the downpayment to households with incomes less than \$23,600 and liquid asset under \$3,000.
- o Iowa's "Individual Home Acquisition Program," which provides grants, closing costs, and downpayment assistance and loan processing. The HAP matches the borrower's contribution dollar-for-dollar up to five percent of the mortgage amount, and is directed to households living at or below 80 percent of area median income.
- o The Massachusetts "Borrower Assistance Program," which assists borrowers pay the closing costs associated with getting a mortgage. Buyers can borrow the lesser of \$5,000 or five percent of the purchase price of the home. The interest, three percent, is deferred and repaid at the time of resale, refinancing, or transfer of the property.
- o North Dakota's "Downpayment and Closing Cost Assistance Program," which lends up to \$2,000 to households with incomes not to exceed \$20,000.

- o Pennsylvania's "Closing Cost Assistance Program," which provides a no-interest second mortgage of up to \$2,000.¹⁶¹ The program is available to households who are at or below 75 percent of the area median income and who would have less than \$1,200 in liquid assets remaining after closing.
- o South Dakota's "Single Family Down Payment Assistance Program," which provides low-interest loans for the lesser amount of 50 percent of the buyer's downpayment and closing costs or \$2,000. This program is directed toward low- and moderate income households.

As is evident, there are a wide variety of state-government programs directed toward promoting homeownership by low- and moderate-income households today. Some programs are intended to help overcome the initial costs of home purchases. Other programs are directed toward longer-term affordability.

Private First-Time Home Buyer Programs

A variety of "private" first-time homeowner programs exist today that are backed by institutional investors ranging from financial institutions to religious organizations to large scale public and private pension plans. Consider that:

- o The annual financial report for the *Comptroller of the City of New York* stated in 1992 that the City's Comptroller works with the city's pension funds "to develop innovative targeted investment programs." According to the Comptroller, "aggregate targeted investments in housing completed or in construction have reached \$496 million representing the renovation or construction of nearly 20,000 affordable apartments and homes throughout the City." The total targeted investments in 1992, the Report said, had doubled since 1989.
- o The AFL-CIO reported in 1993 that its Housing Investment Trust fund (HIT) had produced 3,000 units of affordable housing in 1992 alone. The AFL-CIO announced a program in 1993 that "will invest \$660 million in housing and community development projects in 27 cities over the next five years." Amongst the impacts of this initiative, the AFL-CIO said, would be the production of 10,000 to 12,000 units of affordable housing. Since that time, the Minneapolis newspapers have reported a program "to build an estimated \$60 million in affordable housing and commercial space in the Twin Cities through 1998." Detroit papers reported that that city would get about \$40 million in housing construction, or about 450 units. Los Angeles was to receive about \$75 million in low- and moderate-income housing units. Other targeted cities include Atlanta, Boston, Columbus (Ohio), Dallas, Miami, New York, Philadelphia, Pittsburgh, San Antonio, St. Louis, Washington D.C., Baltimore, Chicago, Cleveland, Denver,

¹⁶¹ The Philadelphia County maximum is \$2,500.

Milwaukee, New Orleans, Oakland, Phoenix, Portland (Oregon), Seattle and St. Paul.

- o In 1994, the National Training and Information Center (NTIC) entered into a \$25 million first time homeowners program in Chicago. NTIC, in conjunction with Neighborhood Housing Services of Chicago (NHS) and Freddie Mac, will develop a program focused on the renovation of 700 two-to-four unit properties with five local lenders. In addition to providing downpayment and closing cost assistance, NTIC will provide pre- and post-purchase buyer counselling.

APPENDIX B: POTENTIAL ALTERNATIVE INSTITUTIONAL ARRANGEMENTS

The Linked Deposit Program

A linked deposit program has been defined as involving special programs that use specific deposit arrangements (which often include reduced interest rates) to leverage specific types of loans or to target lending to a special type of borrower by the institution receiving the deposit. According to this description:

* * *linked deposit programs generally allow for discretionary funds to be deposited in such a way as to support programs of particular public benefit. These programs are often characterized by below-market interest rates, flexible terms, and careful targeting to specific credit needs. A well-designed linked deposit program can therefore not only encourage financial institutions to make loans for low-cost housing, agriculture, and economic development, but can also enable these loans to be made at lower interest rates to the borrower.

The political and policy underpinnings of linked deposit programs involve an effort to direct private sector lending into designated areas. According to one political economist, linked deposit programs attempt to use the power inherent in a government's role as a major bank customer to bring about improved bank performance in advancing such economic and social objectives as locally-based economic development, affordable housing, and non-discriminatory lending practices. "[Linked deposit programs] promise to use the public sector's financial clout to promote the achievement of widely-shared public goals."

The programmatic objectives of a linked deposit program are several-fold. They are designed to generate additional private capital. They are designed to target that capital to desired investments. They are designed to make that capital more affordable to the targeted population. In sum, linked deposit programs can "serv(e) as a catalyst for lending activity. State funds leverage private funding when other means are not available--thereby sending private funds to the areas of greatest need."

In a typical linked deposit program, the state treasurer purchases certificates of deposit from eligible banks using state funds designated by the legislature. The financial institution, in turn, lends those funds to borrowers who meet eligibility criteria. In exchange for a lowered rate of return on the state's deposit, the bank agrees to charge a lower interest rate on linked deposit loans to borrowers.

Linked deposit programs now exist in ten cities and 17 states for purposes of economic development, community reinvestment, small business incubation, farm preservation, and the like. FSC believes that if successfully pursued by state and local governments for these purposes, linked deposit program can also be successfully pursued by public utilities for energy efficiency financing in low-income housing.

State and Local Housing Finance Agencies

Utilities should be working with state and local Housing Finance Agencies (HFAs), also, in the delivery of low-income energy efficiency through joint partnerships. There are several major categories of resources/incentives which HFAs can use, as illustrated by the six sources which the Vermont Housing Finance Agency (VHFA) has used through the efforts of VEIC. VHFA and the owners bring together to structure deals which work for owners to make their rental properties energy efficient:

- use of cash and restricted accounts
- loans
- adjustments to utility allowances
- low-income housing tax credits
- utility resources
- Low-Income Weatherization Assistance Program services

VHFA, with the property owners and collaborating agencies, combines these resources in many different ways to develop unique, innovative packages which work for the owners.

Cash and restricted accounts include project cost escrow accounts, replacement reserve accounts, surplus operating cash, and residual receipts. The amount of funds available in each of these accounts will vary by individual project. VHFA has control over all of these accounts, either by being a joint signatory on the account with the owner (project cost escrow and residual receipts) or because VHFA approval is required for expenditures from the accounts (replacement reserves and surplus cash).

In many cases, the cash and restricted accounts, when combined with adjustments to utility allowances and/or federal low-income housing tax credits and/or utility services/ incentives and/or weatherization assistance, are enough to make the deal work.

When there is still a need for additional financing, VHFA can provide loans for the balance required. VHFA has acted as lender of last resort for several years to assist owners in making energy improvements where the economics worked. These funds were subject to availability from such sources such as loan prepayments, and were offered and negotiated on a case-by-case basis. In 1994, with the advice and assistance of VEIC, VHFA established a \$500,000 special "Multi-Family Energy Loan Program" at 8% interest for terms of up to ten years. In 1994, they used close to two-thirds of these funds in six projects, and will likely be able to access additional funds for this use when these are depleted.

There are a small number of cases where all of the above resources and practices cannot make the economics of upgrading a project feasible, even when the owner is willing but can not risk loss. VHFA has designed a way to address these cases, by debt restructuring through refunding of the bonds through which the capital was originally provided. VHFA has recently applied to HUD to refund a

portion of its bonds currently at an interest rates of 10.5% - 14% down to 8.5%. VHFA has requested that it be able to retain the savings from this refunding, and use the savings to pay for the increased debt service to make energy, water and rehab improvements.

Utility as Risk Absorber

There exists an entire *genre* of utility investments in low-income DSM that would allow cost-effective utility participation in the delivery of energy efficiency improvements to low-income households. The investment would be provided in the form of a utility guarantee of private financing for energy efficiency improvements. Such an investment would be the energy equivalent to the "soft second mortgage," that financing which is so often crucial to low-income housing development today.

The loan guarantee will be directed toward larger multifamily housing developments rather than to single family detached homes. Nationwide, these larger developments are often underserved by federal low-income weatherization programs. Even in those situations where federal dollars *are* directed to such developments --New York is one good example-- contributions from property owners are often required. In contrast, it would be difficult to reach the market of single-family detached homes through a lending programs, particularly a market of *low-income* single family homes. Thus, limiting the guarantee to multi-family developments is reasonable.

The notion of using loan guarantees as a means of generating dollars of private investment is not new at all. The federal government, in particular, has relied upon loan guarantees for economic development purposes dating back to at least the 1930s. One commentator has identified the primary objective of federal loan guarantees to be: "to enable the federal government to use the resources of others to maximize the general welfare."^{17\}

One analyst observes that "the phrase 'resources of others' generally means funds provided by the private sector. Such funds are usually generated by financing institutions--commercial banks, saving and loan associations, insurance companies, factoring companies, investment banking houses, and venture capital investment companies." Moreover, the term "use" in their identification of the primary objective of federal loan guarantees. Three basic ways exist for the federal loan guarantee program to "use" the "resources of others," they state.

First, the programs attempt to shift, or redirect, resources within the private sector. The certainty of interest and principal payments that arise from a federal loan guarantee can induce private lenders to move their money from one sector of the economy to another. For example, the issuance of federal loan guarantees to rural and urban dwellers during the Great Depression brought badly needed private funds into a

^{17\} Brooks and Cheever, "The Federal Loan Guarantee Program: A Unified Approach," 10 *Journal of Corporation Law* 185, 200 (1984).

collapsing housing industry. Federal loan guarantees made investment in the housing sector a safe bet.

The second way in which the program attempts to `use' private funds to maximize the general welfare is by maintaining `resources in uses to which they were once directed by market forces but which now are less profitable than alternative uses.' It falls upon a Hamiltonian government to decide that some private enterprises, although less profitable than others, are too important to let die. Other values, such as high employment, may be so important as to outweigh the distortion of competitive forces occasioned by the government's injection of life into a possibly moribund enterprise which profit-stricken credit markets would not otherwise touch.

A less controversial `use' of private resources by the federal loan guarantee program is resource employment. Here, the program employs private resources left temporarily idled by short-term fluctuations in economic activity.

The same objectives supporting the federal loan guarantee programs, as well as the same uses of funds, could be ascribed to private utility investments in low-income energy efficiency measures through a utility-financed loan guarantee endeavor. The objective of such a utility loan guarantee program would be to "use" the "resources of others" to maximize the general welfare of the utility. As with the federal loan guarantee program, the "resources of others" would involve private financing, discussed in substantial detail below. The term "maximize the general welfare" would mean to reduce the energy costs (and thus the "unaffordability" of energy bills) to low-income households (along with the social consequences of such unaffordability), to reduce the costs of producing energy through the implementation of least-cost resource acquisition, and to reduce the expanded avoided costs associated with bad debt, credit and collection, working capital and the like.

Revolving Loan Funds

A revolving loan fund is begun by placing an initial block of capital into a "conservation reinvestment fund." The fund is then maintained and expanded by using savings which are obtained from energy conservation projects as a source of new capital. In essence, energy conservation "reinvestment funds" are self-capitalized internal revolving loan funds. Loans are made to specific energy efficiency projects undertaken within the jurisdiction and are repaid to the community from the resulting savings which are then obtained. Savings continued to be put back into the Fund until the total annual reinvestment amount reached a predetermined ceiling.

Once started, the Fund can be maintained and expanded simply by reinvesting the energy dollar savings obtained from the initial projects. The initial outlay to capitalize such a fund can come from any of a variety of sources. A pension plan can help capitalize a fund. WAP dollars can help capitalize the fund, as could utility dollars.¹⁸¹

A revolving loan Fund could be closely modelled on the tremendously successful similar program in Vermont. In 1987, VEIC developed the Home Energy Improvement Loan Program in cooperation with the Vermont Housing Finance Agency (VHFA), to provide below-market rate interest financing to low- and moderate-income people for making energy improvements to their homes. The program was initiated with innovative "energy underwriting" criteria, which allows the post-improvement energy savings to be taken into account when determining the borrowers' ability to repay the loan, and a 90% guarantee of the loans through the Vermont Home Mortgage Guarantee Board.

VEIC began operating the program in conjunction with VHFA and several commercial banks, and how operates the program jointly with the Vermont Development Credit Union with support from VHFA. Over its history, the program has lent \$700,000 to low- and moderate-income homeowners to insulate, air seal, upgrade, and convert space and water-heating systems, and make energy-related home repairs.

¹⁸¹ One source of utility investment in a revolving loan fund, for example, would be the utility avoided costs generated by the existing WAP investments in energy efficiency. *See generally*, R.Colton, *Securitizing Utility Avoided Costs: Creating an Energy Efficiency "Product" for Private Investment in WAP*, Fisher, Sheehan & Colton, Public Finance and General Economics (1994).

**APPENDIX C: LEVELS OF NON-UTILITY DOLLARS
THROUGH LOW-INCOME LEVERAGING PROPOSALS**

1. **Linked deposit program:** The proposal made to the D.C. Public Service Commission for Washington Gas Light Company involved leveraging \$525,000⁹¹ per year with an annual utility expenditure of \$21,000. Assuming a ten year deposit, a four percent foregone interest, and a seven percent (7%) discount rate, the total net present value utility expenditure from each year of additional deposit would be \$147,495.
2. **Revolving loan fund:** In 1987, VEIC developed the Home Energy Improvement Loan Program in cooperation with the Vermont Housing Finance Agency (VHFA), to provide below-market rate interest financing to low- and moderate-income people for making energy improvements to their homes. Over its history, the program has lent \$700,000 to low- and moderate-income homeowners to insulate, air seal, upgrade, and convert space and water-heating systems, and make energy-related home repairs.
3. **Housing Finance Agency partnership:** The state HFA in Vermont has acted as lender of last resort for several years to assist owners in making energy improvements where the economics worked. These funds were subject to availability from such sources such as loan prepayments, and were offered and negotiated on a case-by-case basis. In addition, in 1994, VHFA established a \$500,000 special "Multi-Family Energy Loan Program" at 8% interest for terms of up to ten years. In 1994, they used close to two-thirds of these funds in six projects, and will likely be able to access additional funds for this use when these are depleted.
4. **Redirected Section 8 utility allowance payments (through our HFA program).** Since 1986, VHFA has been making adjustments to utility allowances and contract rents after energy improvements have been made to provide an efficiency investment incentive to property owners. Under this practice, the utility allowance is decreased to reflect the lower energy bills, and the contract rent can therefore be increased. The tenant continues to pay 30% of her/his income for housing, as federally mandated, but the amount paid to the property owner goes up, and the owner can use this additional income to offset the cost of the improvements.
5. **Use of cash and restricted accounts for HFA properties.** Cash and restricted accounts include project cost escrow accounts, replacement reserve accounts, surplus operating cash, and residual receipts. The amount of funds available in each of these accounts will vary by individual project. In Vermont, VHFA has control over all of these accounts, either by being a joint signatory on the account with the owner (project cost escrow and residual receipts) or because VHFA approval is required for expenditures from the accounts (replacement reserves

⁹¹ This would permit 150 units of new or rehabilitated housing to be improved with energy efficiency investments of up to \$3,500 per unit.

and surplus cash).

6. Bond refinancings. The Vermont HFA has designed a way to address these cases, by debt restructuring through refunding of the bonds through which the capital was originally provided. VHFA has recently applied to HUD to refund a portion of its bonds currently at an interest rates of 10.5% - 14% down to 8.5%. VHFA has requested that it be able to retain the savings from this refunding, and use the savings to pay for the increased debt service to make energy, water and rehab improvements. If VHFA receives HUD approval, they plan to work with owners this year to make energy efficiency improvements at seven developments.