

# Weatherization and Replacement of Homes

## IMPROVING HOMES AND COMMUNITIES

Manufactured housing offers affordable homeownership and a pathway to asset building for millions of Americans. Homeownership can promote long-term economic opportunity and provide security during unexpected financial troubles. In addition to the economic benefits, homeownership impacts the way homeowners are seen by others, and – more importantly – how they see themselves.

Seventeen million Americans call manufactured housing “home.” Many of today’s manufactured homes are both high quality and affordable. However, many families who own manufactured homes live in older units built prior to national standards enacted in 1976. These units are often of lesser quality than their modern counterparts, may be in poor condition, are energy inefficient and can even be dangerous.

Weatherization and home replacement programs offer ways to improve these outdated homes, the lives of the families that live in them and the communities in which they are placed. However, there are obstacles that may prevent owners of older homes or homes in manufactured home communities (also known as “mobile home parks,” MHCs are communities in which homeowners rent the land under their home) from participating in these programs. Furthermore, replacement of older units with modern, energy-efficient manufactured homes is a relatively recent idea that has not been widely implemented. The I'M HOME (Innovations in Manufactured Homes) initiative is working to address these challenges and to help ensure that homeowners – and society in general – can enjoy the benefits of improving this significant stock of unsubsidized affordable housing for low-income Americans.

### About This Resource Guide

This resource guide provides an overview of the issues involved in weatherization and replacement of older manufactured homes and mobile homes.<sup>1</sup> It is designed for anyone interested in preserving and expanding a vital source of affordable housing by upgrading existing homes or replacing homes that have outlived their useful lifespan. It is based on a careful review of existing and proposed public and private programs, as well as the National Consumer Law Center’s (NCLC) experience working with advocates in various states. This guide:

- Summarizes the case for replacement of pre-HUD code homes with modern, energy-efficient manufactured housing as an important asset-building strategy.
- Describes existing weatherization programs and their applications for manufactured housing.
- Discusses barriers to replacing substandard manufactured or mobile homes and strategies to overcome them.
- Describes emerging efforts to promote replacement at significant scale.
- Offers recommendations for positive policy change.

## WEATHERIZATION & REPLACEMENT PROGRAMS: PROMOTING ENVIRONMENTAL EFFICIENCY AND ASSET BUILDING

This guide focuses on older manufactured homes built prior to enactment of national standards. Manufactured homes have been a growing sector of housing for the last three quarters of a century and are now common in the United States. Originating as travel trailers or “mobile homes” in the early 20th century and typically used for recreational housing, they gained tremendous popularity after World War II when the demand for housing increased. The growing popularity of manufactured homes in the second half of the 20<sup>th</sup> century corresponded with a rise in their use as permanent homes.

While these early homes were built with the intention that they be used as permanent housing, they were still often built like travel trailers used for recreation. A patchwork of state laws regulated the construction of these homes. Some state laws were drafted with the safety of the occupants in mind, but some were far too lenient. Furthermore,

manufacturers found it difficult or were unwilling to build homes that complied with different laws and regulations in each state – therefore, many manufacturers ignored these regulations altogether.

These older homes were typically framed with 2x2 lumber rather than 2x4s. They were often built with electrical wiring systems made from aluminum wire, which can become a fire hazard. Many had small windows, too small to be used as exits in case of fire. In addition, many had only one door – while acceptable in a small, one-room travel trailer, the lack of a second door in a larger permanent home could be extremely dangerous in the event of a fire. The homes may contain large amounts of asbestos and chemicals such as formaldehyde, which can present a safety hazard to occupants.

In 1974, the National Manufactured Housing Construction and Safety Standards Act was passed to “protect the quality, durability, safety and affordability” of manufactured homes. The Act created national, minimum construction standards for manufactured homes built after June 15, 1976. Typically, homes built after this date and pursuant to the HUD code are referred to as manufactured homes, and the older, pre-HUD code homes are referred to as mobile homes. The HUD code sets standards for heating, plumbing, ventilation, air conditioning and electrical systems, design, construction, transportation, energy efficiency, wind resistance and fire safety. It does not guarantee quality in manufactured homes, and there have been problems with inspection or enforcement, but the quality of newer HUD code homes is generally much better than that of older “pre-’76” mobile homes. Not only are HUD code homes better quality than pre-76 mobile homes, but the HUD code has also been strengthened over time, so that HUD code homes built in 2000, for example, are also better than those built in 1980.

Many of these pre-code homes have not aged well. While some of the older homes are in very good shape, many are now in poor condition, sometimes from lack of proper upkeep, but primarily because these homes were often not built with the intention that they would be continuously occupied for 40 years or more. Despite these quality and safety issues, there are many such homes still occupied by families. Some sources estimate that almost three million of the nearly nine million manufactured homes in the United States were built prior to 1980.<sup>2</sup>

A HUD-code manufactured home can be an affordable, energy-efficient and high-quality home. When properly sited upon land in which the homeowner has security of tenure, a newer home, or a well-maintained and weatherized older home, provides housing and can also become a valuable financial asset. Energy-efficiency improvements can help homeowners build assets in addition to home equity, as the money saved on energy bills can be saved or invested. The Home Energy Affordability Gap increased 88% between 2002 and 2008.<sup>3</sup> The amount paid by low-income families for utilities can be greatly reduced by weatherization and replacement.

Manufactured housing can also be an environmentally-friendly housing option. Energy-efficient manufactured homes are now eligible for the “ENERGY STAR” rating. The ENERGY STAR logo indicates an energy-efficient product rated by a set of national guidelines. It allows consumers to comparison shop more easily and understand the likely energy consumption of purchases they make.

To be ENERGY STAR qualified, a manufactured home must be substantially more energy-efficient than a comparable model. The requirements differ based upon the geographic location and climate. The most common improvements that manufacturers make to achieve the necessary energy efficiencies include: using energy-saving products such as Low-Emissance windows (Low-E windows are coated so as to reflect heat, thus saving energy by reflecting indoor heat back inside in the winter and outdoor heat back outside in the summer), and programmable thermostats, increasing wall cavities through the use of 2x6 rather than 2x4 lumber; increasing the R value of insulation (R-value is the thermal resistance or insulating quality of insulation), installing an efficient crossover, better sealing the marriage line in multi-section units, and installing ENERGY STAR appliances. The research organization for the factory-built housing industry, Systems Building Research Alliance, manages the ENERGY STAR certification

### Mrs. Kelly’s Story

Mrs. Kelly lives in rural Kentucky. In 1997, she was in desperate need of decent, safe, affordable housing. She was living with her daughter and granddaughter in a 12 foot by 55 foot 1970 single-wide mobile home. The mobile home she lived in was constructed before the HUD Code improved factory built housing with nationwide safety and structural stability standards. Energy efficiency was not even a consideration in 1970. With the passage of time, the windows and doors leaked air, the water pipes froze in the winter months, the heating system was inadequate, the floor was falling in and the house was cooled by only one small window air-conditioner. At times, her monthly utility bill exceeded \$500! It carried warnings about disconnect dates. Weatherization, remodeling nor repairs were an adequate solution to Mrs. Kelly’s housing problem. Instead, with help from I’M HOME Partner, Frontier Housing, Phyllis Kelly now lives in the Discovery model of Frontier’s Ridgeline Series of single section manufactured homes. Her monthly mortgage payment and utility bill are now less than her electric bill in her previous home. The home is ENERGY STAR® rated, on a solid masonry FHA Title II foundation and is deeded as real estate.

process on behalf of the US Environmental Protection Agency for both the manufactured and modular housing industries.<sup>4</sup> Currently approximately 123 manufactured housing plants in the United States are certified to build ENERGY STAR-qualified homes.

## **SPECIAL CONSIDERATIONS FOR MANUFACTURED HOME COMMUNITIES**

Many older manufactured homes are located in manufactured home communities. These communities provide some advantages to homeowners and the environment. Because the lot or pad upon which the home is placed is rented, the purchase price for a used home that has already been sited in one of these communities is often much lower than a manufactured home sited on owned land or a site-built home. The purchase price tends to remain affordable because a person entering the community is buying just the home, not the land.

Because both the homes and pads are typically small, the communities achieve a density which can only be matched or exceeded by multi-family housing buildings, which are often scarce in areas where manufactured home communities tend to be located. This density further reduces the price of home purchase, and the land preserved by higher density is also an environmental benefit when compared to traditional single-family housing with large yards. Increased density also provides incentives for locating commercial and public services nearby, making walking, biking and public transportation more realistic options for residents. In addition to the environmental benefits, manufactured home communities provide social benefits. Many are long-standing, tight-knit communities with residents who have lived there for many years.

But there are many challenges facing manufactured home communities and their residents. The fundamental disadvantage of these communities is that homeowners typically do not have security that their home will remain at its current location. In some states, landowners may evict residents without good cause or may raise the rent dramatically and force the homeowner to leave. Some landowners may restrict the ability of homeowners to sell their home by refusing to allow the new purchaser to keep the home where it is sited. Often, such communities – especially if they are in a desirable location – are in danger of being closed, displacing all the residents. Being forced to move a manufactured home from its original site can be devastating – and expensive. The cost of moving a home may exceed the value of the home itself. It can also be very difficult, if not impossible, to find another location for the home, and moving can permanently damage a home.<sup>5</sup>

This lack of land security not only lowers the value of the home, but also lowers homeowners' incentive to maintain the home or the community. In particular, lack of land security makes investment in energy efficiency less likely. When residents know that the land on which their homes sit is not secure, and that their home may be turned from an asset into a liability without warning, it is hard to justify improving the home's energy efficiency or replacing an older home.

Among policy options to address the underlying problem has been an effort to enact state laws giving residents in manufactured home communities the opportunity to buy the land on which their homes sit. Although some are more effective than others, seventeen states now have laws that foster resident ownership of communities. Some of these laws require community owners to give residents notice prior to the sale of a manufactured home community, so that they can make an offer to purchase it themselves. Others provide a tax incentive for sale of the land to the residents. In New Hampshire, residents have collectively purchased over 90 communities, bettering the lives of thousands of homeowners. California has at least 100 resident-owned communities and Florida has hundreds. Vermont has converted over 40 communities to either resident or nonprofit ownership. These policies are discussed in detail in another resource guide in this series.<sup>6</sup>

If residents are able to purchase the community, they may be eligible for funds to repair or replace failing systems, such as water and septic, that would not be available to a private investor community owner. Some communities have been able to obtain Community Development Block Grant (CDBG), U.S. Department of Agriculture and other funding. Not only does this increase the ability of the residents to purchase their community, but it also results in better living conditions for residents. While such improvements make the community itself more livable and attractive, individual homeowners are typically not able to upgrade their homes as part of this process.

As increasing numbers of states adopt policies that foster resident ownership of manufactured home communities, and technical assistance for such conversions becomes available, more communities will be owned by the homeowners who live there. Even homeowners who do not purchase their community will have more control over their future as policies protecting their ability to remain in the community and sell the home where it is are put into place. However, while the communities are improving, homeowners often have no choice but to remain in their existing homes. These homes are often pre-HUD code homes and may be in poor condition. These homes could benefit greatly from weatherization, and sometimes replacement.

## WEATHERIZATION

### Existing Public and Private Weatherization Programs

While Congress created national standards for the building of manufactured homes in the early 1970s, the energy crisis greatly increased energy costs. This was an especially heavy burden on low-income households. One governmental response was the Weatherization Assistance Program, created in 1976 as part of the Energy Conservation and Production Act. The program, overseen by the Department of Energy (DOE), was meant to improve the energy efficiency of low-income households. Funds are typically used for installing insulation, sealing ductwork, and other such energy saving measures. It is a block grant program: each state is allocated a certain amount and creates a plan to implement the program under the supervision of the DOE. The amount that each state receives is based on a fixed allocation that differs from state to state, plus a varying amount computed by a formula based upon each state's low-income population, climatic conditions and the approximate residential energy expenditures by low-income households. States then subcontract with local providers to serve individual homeowners.

The program has traditionally been underfunded. In 2008, the program received \$227 million – in real dollar terms, less than half the \$245 million it received in 1983. However, recent changes have expanded funding, broadened eligibility and increased the amounts that may be spent per household. In 2009, the American Recovery and Reinvestment Act (ARRA) dramatically increased funding, providing \$5 billion in additional funds that the DOE Weatherization Program will distribute. This is in addition to the \$450 million appropriated for regular 2009 funding. Eligibility under ARRA has broadened and is now set at 200% or less (compared to 125% previously) of the federal poverty guidelines. Alternatively, eligibility may also be based upon cash assistance payments received by household members. A state may also choose to make all of its Low Income Home Energy Assistance Program (LIHEAP)-eligible households eligible for weatherization.<sup>7</sup> Priority must be given to the elderly and disabled and may be extended to families with children. The work done, including labor, weatherization materials and related matters, cannot exceed an average of \$6,500 per dwelling.

States must create and submit annual weatherization plans after notice and a public hearing. The notice generally just consists of an announcement of the hearing and information about how to view the plan. The plan must include a production schedule, an estimate of the number of homes that will be weatherized, what type of work will be done, estimates of energy to be conserved, how the work will be allocated among areas of the state, what non-federal and non-weatherization funds will be used, who will be eligible, and procedures to ensure that tenants (in the case of rental housing) will be protected.

There are other government weatherization programs as well. The Department of Agriculture has a weatherization program as part of its Section 504 Rural Housing loan and grant program for improvement of rural dwellings. Part of the National Affordable Housing Act includes a model program to provide weatherization and repairs for structurally-unsound homes and calls upon the Secretary of Housing and Urban Development to create a model program to repair homes of families receiving DOE weatherization assistance whose homes are in danger of becoming uninhabitable and not sufficiently sound to allow weatherization without repair.<sup>8</sup> The repairs could include roofing, electrical, plumbing, furnace and foundation repairs or replacement. It does not appear that this program has ever been implemented or utilized.

Many states also provide funding for weatherization assistance programs from both state funding and other federal funds.<sup>9</sup> Most states contribute about 10% of their LIHEAP funds toward weatherization.

In addition to the government weatherization programs, private utilities also fund energy efficiency programs, often because of requirements imposed by state public utility commissions. These programs typically add about \$250 million to weatherization programs nationwide. Combining utility and DOE funding allows more homes to benefit from weatherization than either program could serve operating independently.

In addition to traditional weatherization, a number of other related programs have been created. In North Carolina, a program pays the cost for purchasers of new manufactured homes to upgrade the electric furnace and air conditioner to an energy-efficient heat pump.<sup>10</sup> The cost is about \$700 per home. Researchers estimate the upgraded units save about \$643 per year. Funding for the program comes from the settlement of an oil overcharge case. Several Western states and Canada have joined together to create the Northwest Energy-efficient Manufactured Home (NEEM) Program. This program provides certification for energy efficient homes. The homes are certified as "Eco-rated." It is a voluntary program that creates standards to manufacture homes that meet criteria in five areas: Energy Efficiency, Construction Practice, Material Efficiency, Indoor Air Quality, and Water Efficiency.

### Weatherization of Older Homes – Challenges of Using Existing Programs

While some of the programs discussed in the previous section such as the ENERGY STAR program and the North Carolina program for appliances focus on manufactured homes, the unique challenges and opportunities that manufactured homes present were not the focus of the Energy Department's program and most other weatherization programs. Consequently the

programs were not designed to address the needs of some owners of manufactured homes. Many of the issues particular to manufactured housing, such as specific problems stemming from the design of pre-HUD code homes, and the complexities of working in land-lease communities, are not addressed by the Energy Conservation and Production Act.

Manufactured housing represents an array of energy-efficiency standards, from older, poorly constructed, very inefficient units to modern, efficient models. While the energy efficiency of older units can be greatly improved through weatherization, there are statutes, regulations, state priorities and policies at private utilities related to weatherization that can present challenges and hurdles to the use of these programs for manufactured homes and especially mobile homes.

**Non-energy savings repairs:** One issue that often arises with the weatherization of older manufactured homes is the need for repairs. Structural and non-energy saving repairs present special problems. Use of DOE weatherization funding is generally restricted to improving the heating or cooling efficiency of a low-income program participant's home,<sup>11</sup> though local agencies may also spend limited funds to eliminate health and safety hazards when necessary. Funding from private utility companies is constrained in the low-income conservation programs by the requirement that such programs be "cost-effective." The term "cost-effective" is a term of art, basically meaning that the cost of the conservation measures must be less than the value of the energy savings. A cost-effective program, in other words, must lower the total energy costs by an amount greater than the cost of the conservation measures.<sup>12</sup>

While funding for these structural or non-energy saving repairs is difficult to obtain under existing programs, such repairs are often required before the energy-saving measures will have any impact. For example, it is useless to install insulation in a roof when there are holes in the roof that will ruin the insulation. While these home repairs may be a necessary precondition to the effective installation of energy-saving devices, they do not always save additional energy by themselves. Every dollar spent on such repairs, therefore, adds a dollar of expense that must be offset by the energy savings generated by the conservation measures. Given the initial problem – that low-income households may often present a small savings potential to begin with – it is less likely that the program will test as cost-effective if the cost of home repairs is included in the costs of the conservation measure.

**Specialized training requirements:** Another issue for weatherizing manufactured homes is the special training and education required. These homes present real weatherization challenges. As described above, many older homes were built with 2x2 lumber rather than 2x4s, so wall and ceiling space may be insufficient to permit adding insulation. The underbelly of the home may not have been properly sealed, or may have been damaged in transit or setup. To assist in identifying weatherization measures, the DOE created the Manufactured Home Energy Audit (MHEA).<sup>13</sup> Some states have also done research on the issues of weatherizing manufactured homes.<sup>14</sup> Typically, recommendations include sealing and repairing the ductwork and underbelly; installing added insulation, a moisture barrier, and new doors or windows; and repairing or replacing heating and cooling systems. Problems may be especially severe in older units or units that were not properly sited. Multi-sectional units are especially prone to problems in the marriage wall connecting the separately constructed units if they were not properly sited.<sup>15</sup>

**Cost-benefit issues:** Combining DOE, state and utility funding allows for the improvement of some homes that could not be served by any one program alone. However, even a combined program will not address the issues presented by some older manufactured homes. Because of needed structural repairs and the age and condition of some units, it may not make sense to weatherize some existing homes. Sometimes the best option is replacement of the older unit. The traditional DOE weatherization program may not be the best option in such situations. Federal regulatory restrictions-including the limit on average expenditures per dwelling (prior to the increase to \$6,500 under the ARRA, the limit had been \$2,500 in 2000 and adjusted by the consumer price index each year) and the restriction limiting allowable expenditures to tools, labor, materials and other items related to weatherization, often preclude replacement.<sup>16</sup> The program was not designed with replacement in mind. Often state annual weatherization plans will also not include, or limit the focus on, manufactured homes.

In addition, some groups engaged in weatherization are reluctant to replace manufactured homes. Traditional weatherization activities can show a very large "bang for the buck" in terms of energy conservation. The cost effectiveness of the programs in pure energy-saving terms is one of the primary benefits weatherization advocates can point to when seeking to maintain or increase funding for the important work. Existing programs may be fearful that the cost of replacement may exceed the energy savings and so undercut this measure of the program's worth. Also, while weatherization measures may make the home more livable and are of great value to the homeowner, they do not greatly increase the market value of the home. Weatherization advocates may be reluctant to attempt replacement for fear that replacement will be seen as a sort of free giveaway to homeowners that could negatively influence the views of some people towards the programs. There are, however, other options and alternatives for replacement of homes. These are discussed in the replacement section below.

**Weatherization of Homes in Communities:** As described above, homeowners living in manufactured home communities face particular challenges, including weatherization. They seldom have the security that their homes can remain where they are placed. Rent increases, eviction and community closure can eliminate the investment they have in their homes, including any

weatherization improvements. While the DOE weatherization program was not designed with MHC-specific challenges in mind, the issue of weatherization in rental units was addressed and can inform the analysis of weatherization of manufactured homes.

Local administering agencies are often reluctant to put weatherization resources into rental units, due to legitimate concern that the benefits from weatherization of rental units would ultimately accrue to the landlords and not to the low-income tenants. Landlords may raise the rent after weatherization to reflect increased value, or they may sell the property to realize the higher value after weatherization. Likewise, manufactured home community landowners may raise the lot rent or attempt to limit the homeowner's ability to sell the home to reap the benefit of the increased value of the home.

The DOE weatherization statute attempts to address some of the concerns about rental units by requiring states to ensure that the benefits of weatherization accrue primarily to the low-income residents. The statute requires that:

- The benefits of weatherization accrue primarily to the low-income residents.
- For a reasonable period of time after weatherization the residents will not be subjected to rent increases unless those increases are demonstrably related to matters other than the weatherization.
- Residents may file a complaint, in response to which the owner must demonstrate that the rent increase relates to matters other than the weatherization.
- No undue or excessive enhancement will occur to the value of such dwelling units.

DOE regulations reiterate the statutory protections and detail ways the program may seek to protect residents. The regulations permit states to seek a landlord agreement to the placement of a lien or other contract restrictions to protect the federal investment, and address the issues of eviction and sale of property. DOE advised states to adopt a "comprehensive approach to weatherizing rentals" in order to meet their statutory obligations, leaving states relatively broad discretion to address tenant protection as part of their plans.

States thus also may address concerns specific to manufactured home communities. The notice and public hearing procedures described above for the required state plans offer an opportunity for owners and advocates of manufactured housing to seek protections for homeowners in communities. Public hearings and comment periods generally occur in the spring prior to the submission deadline of the state plans. In 2009, the state plans were due by May 12, 2009. Advocates should develop a relationship with the relevant state agency and add their names to the notice list for state plans or any other rulemaking concerning the state weatherization program.

Advocates for traditional rental tenants have had much success with this strategy. Some states set restrictions on rent increases for a minimum of three to 10 years, and allow local sub grantees to add an additional period of years to the protected period. Other protections were developed to address evictions without cause, increasing the rent for new tenants, and the sale of properties following the completion of the weatherization work.

These same and similar issues also affect homeowners in manufactured home communities. Although the incentives for the community owner may not be the same as for a traditional landlord where the landlord's own building is being repaired, there is still real benefit to the landowner when the repairs are made. The improvement of the housing stock in the community greatly increases the value of the community. Because homes are very rarely moved, these weatherized homes are a real "part" of the community itself.

## **REPLACEMENT OF MOBILE HOMES TO ENERGY-EFFICIENT MANUFACTURED HOMES**

Sometimes the need for structural repairs, and the age and condition of some units makes weatherization infeasible. In such cases, the best option to increase both efficiency and resident satisfaction may be replacement of older units with newer or brand new, energy-efficient units. In addition to energy savings and owner satisfaction, replacement can improve the overall community by removing deteriorating units. There are both state and federal efforts under way to create programs that encourage or subsidize replacement of these homes.

### **Barriers to Replacement of Mobile Homes**

**Financing:** When the owner of an older manufactured home decides that replacing the home with a new or newer model makes more sense than making extensive repairs, he or she will generally need to find financing to support the cost of a new home. While finding an affordable loan may be challenging for any low-income homeowner, particularly those who already own

their homes free and clear, for homeowners in a manufactured home community, finding fair and affordable financing may be particularly challenging.

This issue often arises when a community is converted to resident ownership, or when policy changes provide more security for homeowners. Prior to conversions or policy improvement, homeowners may have had little motivation to replace an older home because of the danger that the landowner may close the community or raise the rent to a level that forces the homeowner to leave. The homeowner does not wish to take the chance that a large investment in a new home may be put at risk without secure land tenure. But once the community is resident owned or the homeowner feels secure in the ability to remain in the community at fair terms, replacing the home may make much more sense.

Unfortunately, lenders often do not appreciate the greatly reduced risk of default that is conferred by improved land security – the knowledge that the home may remain where it is sited and be sold to a new purchaser where it is. After resident purchase or policy improvements, homeowners wishing to replace their home still often face the more costly terms typically offered to those seeking to finance homes on rented land. This reluctance on the part of lenders may make financing the purchase of a new manufactured home to replace a deteriorated home prohibitively expensive, and sources of financing for used homes are limited. Homeowners with older homes on owned land often face problems in obtaining fair financing too. For a more complete discussion of manufactured home financing both in MHCs and on owned land see [www.cfed.org/ go/mhtoolkit](http://www.cfed.org/go/mhtoolkit).

**Size of Replacement Units:** Early manufactured homes that were intended primarily for recreational purposes were generally built so that they could be easily pulled behind a car. This generally limited the size of such units to eight feet wide or less and often less than 20 feet long. When year-round, permanent use became more common, the size of the units increased. Ten foot wide units became more common and often the length extended up to 50 or 60 feet. Many manufactured home communities were established when these dimensions were the norm.

Today, the manufactured home market has changed considerably. In the 1960s, manufacturers began to sell two units that would be joined together on site to form one home, commonly called a “doublewide.” These multi-section units proved to be very popular for a number of reasons. Manufacturers and dealers could often make a greater profit selling one of these multi-sectional units than one “single-wide” unit. An often unrecognized factor contributing to the popularity of multi-section units was that many areas of the country had placed zoning restrictions, restrictive covenants and other restrictions on new homes that required them to meet or exceed a particular size. By the 1990s, multi-sectional units outsold single wide homes by two to one most years. That trend has continued to this day, causing many manufacturers to reduce offerings for singlewide homes. The singlewide homes that are offered today are typically much bigger than older homes. New singlewide homes are often fourteen or sixteen feet wide and up to 80 feet in length.

Many manufactured home communities were created when manufactured homes were much smaller. New, larger homes will thus often not fit the lot and the pad upon which the original home sat. Some manufacturers produce homes that, although larger than the older homes, will still fit on some of the older pads, although these homes are not available everywhere. Even though homes are now built to national standards (with some variation for particular geographic areas, such as changes that allow the home to survive increased winds in hurricane prone regions), the availability of homes is still typically dependent upon a regional market. Homes are difficult and expensive to transport, so most homes are still manufactured in close proximity to where they will ultimately be placed.

Recently, there has been an increased interest in smaller homes in general for environmental reasons and simplicity’s sake. This trend has extended to prefabricated homes.<sup>17</sup> While some manufactured home makers are exploring this trend, such homes are still not routinely available.

The reluctance of manufacturers to make small homes may be due in part to small profit margins on such units, but is also due to the lower demand for such homes. Hopefully, as more homeowners in the increasing numbers of resident-owned communities seek to upgrade their homes and more programs are implemented promoting replacement of old units, the increasing demand for small units will result in increasing availability across the country.

### **Traditional Weatherization Programs and Replacement**

Traditional weatherization programs, both DOE- and utility-sponsored, were designed primarily to improve energy efficiency of existing homes. As described in the above section on weatherization, this focus has led to formulas and restrictions which make replacement difficult or impossible under the programs.

The recent increase in weatherization funding through the American Recovery and Reinvestment Act of 2009 (ARRA) raises an additional wrinkle. Early in the DOE program’s history, most weatherization efforts involved quick, low-tech steps such as caulking windows and adding weather stripping around doors and windows. The work was often done by unskilled workers and volunteers. In the 1980s and beyond, the efforts shifted to include a much more high-tech assessment of weatherization

needs, and the work was done by trained laborers. Many of the workers were formerly unskilled and receive the necessary training from weatherization funded programs. The training of unskilled workers has aided the program and benefited the lives of workers as well.

The additional funding under the ARRA came with a requirement that the work be conducted in compliance with the Davis-Bacon Act, which requires that workers must be paid at local prevailing wage rates as determined by the Department of Labor. Wages are set for different geographic locations and different classifications such as carpenter, bricklayer and millwright. Previously, weatherization programs were exempt from these requirements, and the non-ARRA funds remain exempt. While workers conducting weatherization improvements should certainly be fairly compensated, the application of the Davis-Bacon Act does raise issues.<sup>18</sup>

Because wages under the Davis-Bacon Act are often higher than laborers doing weatherization work have been paid in the past, the calculations regarding cost-effectiveness will change, effectively making weatherization more expensive. The Act also includes reporting and documentation requirements that may be difficult for some entities engaged in weatherization to comply with or that many existing providers will find burdensome. The combined effect of these changes may be to make replacement a more reasonable option based upon cost and feasibility when compared to weatherization of existing deteriorated homes.

### **New Efforts to Assist Replacement**

There have been an increasing number of efforts, both state and local, to make replacement of older homes a more accessible option. The Oregon Department of Energy assisted in the creation of a focus group of housing providers, community service providers, utilities, manufactured housing industry representatives, financial institutions and weatherization contractors to study ways to replace older units and make weatherization subsidies available for down payments on the new units. In New York, a Community Development Block Grant was used to replace deteriorating and poorly weatherized manufactured homes.<sup>19</sup> Also in New York, in November 2009, the state created a \$5 million program to replace pre-HUD Code homes with ENERGY STAR rated manufactured homes.<sup>20</sup> In Minnesota, the Apple Valley Mobile Home Replacement Program provides up to \$2,000 for removing and demolishing old homes, assistance with set up and moving costs, and 50% of the down payment for the replacement manufactured home.<sup>21</sup>

Some replacement efforts have focused exclusively on replacement of homes located on land that the homeowner owns.<sup>22</sup> While this addresses concerns raised below about replacement on rented land, it does exclude a large number of homeowners who cannot take advantage of the program. Although the exclusion of so many homeowners is a problem, such programs can be very useful for the owners who are eligible.

One of the most ambitious efforts has been the ENERGY STAR mortgage program. This program is the result of a coordinated effort by the Energy Programs Consortium, the Department of Energy, and the Environmental Protection Agency, with support from the Ford Foundation and other philanthropies. The ENERGY STAR Mortgage is intended to provide financing for home replacement or home improvements that will cut energy expenditure by 20% or more.

In Maine, Maine Housing, through an effort with the Energy Programs Consortium (EPC) has developed a pilot program promoting ENERGY STAR mortgages for manufactured housing replacement in Maine. This pilot, with support from the Ford Foundation, is an effort to create a larger multi-state pilot program with the U.S. Department of Energy.

Energy-efficient Mortgages (EEM) are another product that has been used in an effort to facilitate financing or replacement manufactured homes. The Federal Housing Administration, Fannie Mae, Freddie Mac and the Veterans Administration all offer EEMs. These efforts are laudable and will hopefully increase the availability of financing for replacement homes.

Recently, federal legislation has been proposed as part of a larger climate change bill that would provide rebates to owners of homes built prior to 1976 for the purchase of a new ENERGY STAR manufactured home to replace the old home.<sup>23</sup>

It is particularly instructive to look at some of the recent efforts of I'M HOME partners:

**Frontier Housing:** For Frontier Homes, which serves homebuyers in central Appalachia, balancing affordability, quality and durability is both an innovation and a necessity. Frontier worked diligently with Clayton Homes to design a new energy-efficient, single-section manufactured home that is not only affordable for families earning as little as \$12,000 a year, but also allows them to replace their current housing with a modern, high-quality home. The partners have achieved this in the new Ridgeline Series, one of several manufactured home choices offered by Frontier as a result of an ongoing business relationship with Clayton Homes. The two organizations have developed a model for Frontier to serve as broker of Clayton products to other nonprofit housing developers.

Frontier sought affordable solutions to address the significant stock of dilapidated, substandard housing in its service area. Having already installed more than 30 doublewide manufactured homes (both new and replacement homes), the organization set the first of 25 planned high quality and energy-efficient singlewides in October. The Ridgeline Series homes have 2x6 external construction, 2x4 internal construction, upgraded insulation levels and windows, vinyl siding, shutters and shingled roofs. These upgrades ensure a longer lifespan for the unit and increased energy efficiency without sacrificing construction quality for very low-income homebuyers. These ENERGY STAR® qualified homes are projected to save homeowners as much as \$1,800 annually in energy costs.

**NeighborWorks Montana:** In 2007, the Montana Legislature appropriated \$350,000 to fund a pilot program for the decommissioning and replacement of older manufactured homes. The appropriation was based on the results of a study commissioned by local Community Action Programs. The study identified nearly 30,000 pre-1976 manufactured homes in Montana, for which the cost of weatherization improvements often exceeded the value of the home. Montana has a higher proportion of manufactured homes than many other states due to its rural nature and low average income. In addition to the funding provided by the State of Montana decommissioning and replacement program, NeighborWorks Montana's program leverages weatherization funds, NeighborWorks America funding, U.S. Department of Housing and Urban development HOME Investment Partnerships Program funds and bank financing.

A key element in the financing was agreement by weatherization programs that \$5,000 of their funds could be used toward a replacement home in lieu of using the funds for weatherizing the old home. With a financing package that includes a contribution from the owner and from the State Replacement Fund as well as financing through the weatherization grant and HOME deferred mortgage funds. The homeowner's payment on their contribution is more than offset by the average monthly energy savings.

**HomeSight and the Housing Authority of Snohomish County:** Building on HomeSight's experience as a developer of innovative manufactured housing townhome subdivisions, the Seattle-based nonprofit is partnering with a nearby housing authority to replace dilapidated homes in the manufactured home communities owned by the housing authority. With collaboration by the Boeing Employees Credit Union to supply single-family financing, the partners are removing older homes (recycling as many components as possible) and replacing them with high quality HUD-code homes, built to the specifications of the eco-rated label developed by Pacific Northwest state energy offices and other partners.

**Family Housing Resources:** In the Flowing Wells neighborhood outside Tucson, Family Housing Resources (FHR) has built on work started by community activist Ellie Towne. Ellie first organized community members to bring facilities, such as a park and state-of-the-art community center, to the area. After achieving these goals and winning a 2007 All-America City award in the process, the community set its eyes on improving local housing conditions through a partnership with FHR and Pima County. To date, FHR has replaced seven pre-1976 mobile homes with modern and spacious manufactured homes, without sacrificing affordability.

**The Primavera Foundation:** In South Tucson, The Primavera Foundation has launched its replacement housing program. The city of South Tucson meets the U.S. Department of Housing and Urban Development definition of a colonia<sup>24</sup> due to the degradation of its housing stock, much of which is adobe construction that is literally crumbling. But neighborhood ties are strong, with many intergenerational families. Primavera is working with these families, many of whom earn as little as \$15,000 a year, to replace homes that are damaged beyond the point of rehabilitation. With one home in place as a model, Primavera has recently helped its first customer for the program relocate from her aging home to a modern, energy-efficient manufactured home.

### Considerations for Replacement of Homes

**Lack of Security of Land Tenure:** Replacement of manufactured homes in rental communities raises many of the same issues as weatherization of homes. Because homeowners in communities seldom have security of land tenure, they are vulnerable to losing their substantial investment in a newer or new replacement home. Accordingly, it makes sense to focus a replacement home program on homeowners who, through state policy protections or resident ownership of the community, have security of land tenure.

Efforts should be made to help landowners understand the benefits of replacing aging homes in the community. Understanding that these programs will improve the housing stock in the community with newer homes and make the community a more desirable place to live, may help persuade landowners to be more amenable to changes in the terms of their agreements with homeowners that provide greater security of land tenure.

**Predatory Lending:** Issues of fairness in financing arise more often in replacement of homes than in weatherization. Replacement will typically require that the homeowner take out a loan to pay for at least a part of the purchase of the newer home. Sometimes, as part of an effort to extend financing for the replacement of an older home, the focus may be so intent

upon the need for financing that insufficient attention is given to other issues such as long term affordability of the loan. For example, even if an upgrade will produce energy savings, financing it with a loan that puts the homeowner beyond a reasonable debt-to-income ratio may do more harm than good. This is particularly so in light of the precarious finances of some low-income homeowners and the volatile nature of energy prices.

Any replacement program should contain protections to ensure that the financing for a new or newer home is provided to the homeowner at fair terms. The loan should be one that the homeowner can afford. Preferably, such a loan should be a fully amortizing 15- or 30-year mortgage at a fixed rate set in response to the perceived credit risk of the loan, with no prepayment penalties.

**Dealer Capture of Benefits:** Another issue that arises in replacement programs is that of dealer capture of the benefits intended for the homeowner. Incentives provided by replacement programs are intended to encourage the homeowner to consider replacement of an older home and to make possible a replacement that would otherwise be unaffordable. Without adequate protections, incentives such as rebates, loan guarantees or other financial incentives may be captured by the manufactured home dealer selling the home.

In the sale of a manufactured home, the dealer typically has control of a number of variables of the transaction. Consumers are one-time players without all the knowledge, experience and negotiating techniques to obtain a fair deal.

Dealers will have an incentive to use the rebate to entice consumers to replace an older home, but then deprive homeowners of the benefit of the rebate. Dealers may simply raise the price of the home or other items in the transaction by the same amount as the rebate. In this way, the money intended to reduce the cost for the homeowner to replace the home, is instead taken as excess profit by the dealer.

### **Decommissioning of Homes to be Replaced**

When older manufactured homes are replaced with newer more energy efficient units, something must be done with the older home. The first question that must be answered is whether the replacement program does, or should, mandate the decommissioning of all or some replaced homes. The second question is how homes should be decommissioned.

As described above, the older homes needing to be replaced are often in poor condition and energy inefficient. These homes can even be dangerous and, especially after being moved, may not be fit for habitation. If such a unit is replaced it should be decommissioned so that it will not be used again for habitation. Unfortunately, these homes often are resold and subsequently used as residential dwellings. While in most places zoning restrictions and community restrictions bar the placement of pre-1976 homes, some jurisdictions do not. Older homes are often moved and placed in these less regulated areas. Pre-1976 homes are also sometimes sited in jurisdictions that prohibit placing such homes contrary to local rules or restrictions. Even if the replaced home is not used again as a home, it may not be properly disposed of, but rather simply abandoned, because the proper disposal of a home can be expensive.

In order to ensure that unsafe homes that are replaced by new units are not reused as housing, proposed replacement programs often call for the decommissioning of all replaced homes. If effectively enforced, this certainly resolves the problem of potential reuse of the home. However it raises two other issues: how the homes will be decommissioned (which is addressed later in this document) and what happens to homes that remain habitable but that would be destroyed under such a program requirement?

No one wants to destroy a unit that could still provide a good, safe home for a family. Such destruction would reduce the number of homes available to low-income families and could even be environmentally harmful when the impact and cost of constructing alternative housing for a family that may have used the home as well as the impact and cost of destroying the old home. And yet no one wants a family to live in an unsafe or uninhabitable unit, just because it was cheap as it was being replaced by a newer, more energy efficient model.

Reconciling these goals can be difficult. Conceivably each home being replaced could be examined and a determination made as to whether the home could be reused. Unfortunately such a program would be rather expensive, especially since many units that will be inspected will likely be found to be unfit. Such an evaluation also presents an opportunity for fraud if a profit may be made by reselling the replaced units. The replaced units are also typically energy inefficient and their continued use may be detrimental to the environment. Finally, the resale or other non-decommissioning disposition of replaced units is not a primary goal of a replacement program and implementation would present real difficulty. Such programs are simply not typically designed to sell or give away replaced units effectively.

While the design of any program must attempt to balance these competing interests, replacement of pre-1976 units will present the strongest case for a mandate that all replaced units be decommissioned. Pre-1976 units are the most likely to be unfit for

habitation and the least likely to have any residual value. They are also the units most likely to be moved to other jurisdictions or sited in violation of laws or restrictions. While there is the chance that small number of replaced units could be beneficially used elsewhere, it is unlikely that the number is sufficient to outweigh both the cost of inspection of all replaced units as well as the danger that unfit units will be put back into service.

When homes are to be decommissioned it is important that it is done in an environmentally sound manner. Older units may contain many dangerous materials. Even relatively benign material can add greatly to solid waste disposal at local landfills. Just disposing of the replaced units can be expensive, but safely removing hazardous materials and properly decommissioning the units can be even more expensive. This often results in discarded units being illegally burned or simply abandoned.

Some efforts have been made at recycling old units that are being decommissioned. Programs in Wisconsin,<sup>25</sup> Vermont,<sup>26</sup> North Carolina<sup>27</sup> and elsewhere are providing examples of how such programs might work. While recycling units can be expensive, it greatly reduces the negative impact of large amounts of solid waste being placed in landfills and ensure proper disposal of the units.

Proper disposal is expensive. While every jurisdiction should examine methods of ensuring proper disposal, including subsidies for proper disposal that remove the incentive to improperly dispose of units by reducing the cost of disposing of units properly, such a discussion is beyond the scope of this document. Limiting the analysis to designing a replacement program, such a program must factor in decommissioning costs as a required cost of the program, the same as the cost to purchase or site the new unit.

## POLICY RECOMMENDATIONS

### Strong Policy for Manufactured Homes

Key elements that promote affordable, energy-efficient manufactured homes include:

- Ensuring that different programs and funding sources are offered together in order to provide a continuum of measures to assist homeowners and improve energy efficiency, such as incentives that allow for weatherization, rehabilitation of existing homes, replacement of older units with newer used homes, and replacement of older units with brand new energy-efficient homes.
- Ensuring that homeowners receive the benefit of any incentives for the purchase of a new replacement home and that the incentive is not absorbed by the dealer selling the home.
- Ensuring that when homeowners finance a replacement home or the cost of rehabilitation, the loan is affordable for the homeowner and the terms are fair- preferably a fixed rate, fully amortizing 15 to 30-year mortgage at a rate set in response to the perceived credit risk of the loan, with no prepayment penalties.
- Ensuring that incentives lead to environmentally sound decommissioning and disposal of homes after they are replaced.
- Targeting funding and incentives to homeowners with secure land tenure (e.g. on fee-simple land, in resident-owned communities or in communities with long-term leases) so to promote appreciation of the new or improved home.

## ENDNOTES

1 A mobile home is a factory-built home built prior to the enactment of national standards in 1976. A manufactured home is a factory-built home built after 1976 to national standards administered by the U.S. Department of Housing and Urban Development.

2 Census Bureau 2007 American Housing Survey Data available at: <http://www.census.gov/hhes/www/housing/ahs/ahs07/ahs07.html>.

3 See Fisher, Sheehan, and Colton, On the Brink: 2008- The Home Energy Affordability Gap, April 2009, available at: [http://www.homeenergyaffordabilitygap.com/downloads/2008\\_Released\\_Apr09/2008%20Census%20Fact%20Sheets.pdf](http://www.homeenergyaffordabilitygap.com/downloads/2008_Released_Apr09/2008%20Census%20Fact%20Sheets.pdf) (calculating that actual energy bills for low-income families exceeded affordable energy bills in the United States by \$34 billion at 2007/2008 winter heating fuel) prices).

4 See [http://www.research-alliance.org/pages/es\\_main.htm](http://www.research-alliance.org/pages/es_main.htm)

5 For more information on land tenure security issues, please read Protecting Fundamental Freedoms in Communities and Promoting Resident Ownership of Communities, both available at [www.cfed.org/go/mhtoolkit](http://www.cfed.org/go/mhtoolkit).

6 Manufactured Housing Policy Brief, Promoting Resident Ownership of Communities, available at [www.cfed.org](http://www.cfed.org).

7 LIHEAP provide assistance to low-income households to meet their immediate home energy needs.

8 42 U.S.C. § 12807.

9 Contact information for the Weatherization Assistance Program in each state is available at: [http://apps1.eere.energy.gov/weatherization/state\\_contacts.cfm](http://apps1.eere.energy.gov/weatherization/state_contacts.cfm).

10 See, [http://apps1.eere.energy.gov/state\\_energy\\_program/project\\_brief\\_detail.cfm/pb\\_id=1129](http://apps1.eere.energy.gov/state_energy_program/project_brief_detail.cfm/pb_id=1129).

11 10 C.F.R. § 440.18.

12 The computation of cost effectiveness can become very complex. Some measure examine the cost to the utility, while other look to the total costs to the utility and the program participants (when using the “Total Resource Cost Test”) or the costs to society as a whole (the “Societal Cost Test”).

13 For more information about the Manufactured Home Energy Audit see [http://weatherization.ornl.gov/national\\_energy\\_audit.htm](http://weatherization.ornl.gov/national_energy_audit.htm); see also, Mark P.Ternes, Validation of the Manufactured Home Energy Audit, Oak Ridge National Laboratory, November 2007, <http://weatherization.ornl.gov/pdf/CON%20501.pdf>.

14 See, e.g., Bob Scott and Lyn M. Bartges, Weatherizing mobile homes, Home Energy, July/August 2004, available at: [http://www.homeenergy.org/article\\_preview.php?id=47&article\\_title=Weatherizing\\_Mobile\\_Homes](http://www.homeenergy.org/article_preview.php?id=47&article_title=Weatherizing_Mobile_Homes) (provides insight in W.V. manufactured home weatherization program which weatherizes between 400 and 500 manufactured homes per year).

15 For more information about problems common to the placement and construction of manufactured homes see, National Consumer Law Center, Consumer Warranty Law §17 (3d ed. 2006 and Supp.).

16 10 C.F.R. § 440.18.

17 See Home Delivery: Fabricating the Modern Dwelling, available at <http://www.momahomedelivery.org/>.

18 This document takes no position on whether or not the Davis-Bacon Act should apply to weatherization programs, but rather looks at the implications for manufactured home weatherization.

19 William Apgar, Allegra Calder, Michael Collins, and Mark Duda, (2002), An Examination of Manufactured Housing As a Community-and Asset-Building Strategy, Neighborhood Reinvestment Corporation in collaboration with Joint Center for Housing Studies of Harvard University, available at: [http://www.jchs.harvard.edu/publications/communitydevelopment/W02-11\\_apgar\\_et\\_al.pdf](http://www.jchs.harvard.edu/publications/communitydevelopment/W02-11_apgar_et_al.pdf).

20 See <http://www.dhcr.state.ny.us/Programs/NYSHome/MHRI/>

21 Information about the program is available at: <http://www.dakotacda.org/homeowners.htm>.

22 See, e.g. The North Country Affordable Housing’s Mobile Home Replacement Program. The program provides up to \$20,000 to help low-income home owners replace older homes with new, efficient modular homes. Information available at: <http://www.northcountryaffordablehousing.com/mhrp/index.html>.

23 H.R. 2454, 111<sup>th</sup> Cong. § 203 (2009).

24 Colonias are communities in the U.S.-Mexico border region that are noted for their lack of modern infrastructure and inadequate housing.

25 See, e.g. Tomorrow’s Home Foundation mobile home recycling project in Wisconsin, information available at:

<http://www.northcountryaffordablehousing.com/mhrp/index.html> and <http://www.dnr.state.wi.us/org/caer/cfa/EF/RECYCLE/Grantees/tomorrow.html>.

26 See, Gail D. Johnson, Vermont Studies Mobile Home Recycling, Waste Age, Mar 1, 2001, available at: [http://wasteage.com/mag/waste\\_vermont\\_studies\\_mobile/](http://wasteage.com/mag/waste_vermont_studies_mobile/).

27 See Alamance County Mobile Home Recycling Program, information available at:

<http://www.alamance-nc.com/d/county-attorney/mobile-home-recycling-program.html>.

## ABOUT I’M HOME

I’M HOME, or Innovations in Manufactured Homes, is an initiative of CFED, a national nonprofit organization dedicated to expanding economic opportunities for all Americans. The I’M HOME network includes nonprofit and for-profit, national and local partners who together work toward ensuring that all homeowners, regardless of whether their home is manufactured or site-built, enjoy the same rights and privileges of homeownership, including asset-building opportunities. For more information about I’M HOME, please visit [www.cfed.org/go/imhome](http://www.cfed.org/go/imhome).

## ABOUT THE NATIONAL CONSUMER LAW CENTER

The National Consumer Law Center (NCLC) is the nation’s consumer law expert, helping consumers, their advocates and public policymakers use powerful and complex consumer laws on behalf of low-income and vulnerable Americans seeking economic justice. NCLC is the leading consumer legal advocate promoting legal protections for owners of manufactured homes. For more information about NCLC please visit [www.consumerlaw.org](http://www.consumerlaw.org).