

Manufactured Homes Help Both Save the Planet and Save Money for Low-Income Owners

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Addressing affordable housing while simultaneously reducing pollution seems like an impossible task. Yet manufactured housing can do just that.

The American housing market has long benefited from design and finance innovations to meet the changing demands of home buyers. It is also a sector of the economy that has been greatly affected by government interventions in the market. From local zoning and planning decisions to preferential treatment in the federal tax code, housing's progression is a many-chaptered story.

Changes in housing design have been driven by public policy, consumer demand, and producer marketing (the evolution of kitchen appliances from avocado green to stainless steel is one curious example). Often these influences converge, which can, eventually, provide the homeowner with a better home at lower costs. The story of manufactured housing and the development of quality standards is a case study on this.

In one stroke in 1974, Congress changed mobile homes into manufactured housing by passing the National Manufactured Housing Construction and Safety Standards Act. Before the law, there was no incentive to standardize construction quality and cost-effective building practices. Without the act, it is unlikely that industry would have developed innovative and cost-effective construction techniques.¹ And largely that is what happened.

Industry stepped up, revising manufacturing practices to meet or exceed the U.S. Department of Housing and Urban Development (HUD) code, as the 1976 regulations are known. The government trigger and the market's response led to a growth in manufactured housing and a revised view among many Americans, though not all, of this part of the housing market. (The industry suffered a dramatic decline in the early 2000s for many of the same reasons the broader housing market declined a few years later, including, for example, the way manufactured home loans were underwritten and securitized. Recent trends suggest home manufacturers are rebounding albeit at a slower pace than their site builder peers.)

¹ 42 USC Chapter 70: Manufactured Home Construction and Safety Standards (Ithaca, NY: Cornell University Law School, 2013), available at www.law.cornell.edu/uscode/text/42/chapter-70.

The Evolution of Manufactured Homes

Like all housing types, the role of manufactured housing in any particular market varies widely. It ranges from about 20 percent of all housing in South Carolina (this share includes pre-1976 homes, of which there are about 2 million still occupied nationwide) to an inconsequential share in a state such as Hawaii, given the prohibitively high shipping costs. In every market, manufactured housing makes up an outsized share of affordable housing. In the Denver area, 60 percent of manufactured housing is affordable compared with 27 percent of all housing. The proportions are 60 percent and 18 percent in San Diego, and 68 percent and 24 percent in the Bay Area.² But unlike affordable housing that many are familiar with, such as public housing or tenant-based vouchers, manufactured housing is largely unsubsidized, as its affordability is inherent in its construction, which reduces waste, standardizes production, and nearly eliminates weather damage during manufacture.

American policy heavily promotes homeownership, and it is seen, more so than renting, as means for a family to build wealth and enhance its financial stability. This, of course, happens as a family makes its mortgage payments and more goes to principal rather than interest, acting as a type of forced savings account, and as a home appreciates in value, or at least, retains its value. One of the concerns with manufactured housing is that in some scenarios, a home cannot build wealth, as the home may depreciate and the family financed its purchase with a high-cost loan. However, if built, sited, and financed with the long-term interest of the homeowner in mind, manufactured homes can and do appreciate.

The guiding philosophy of the Corporation for Enterprise Development's (CFED) I'M HOME initiative is to ensure that manufactured homeownership is treated fairly by lenders and policy makers and is developed in a way that provides its owners real value, high-quality housing, and the chance to build wealth. The Next Step is a social enterprise supported by CFED that is building a value chain to connect manufactured housing companies to nonprofit affordable housing developers, called "Network Members." In Next Step's scalable model, manufacturers serve a new market while Network Members find market-based solutions to affordable housing. Following the Next Step system, Network Members site high-quality, highly efficient manufactured homes throughout the country in a way that families can afford and thrive in and that helps dispel the notion that manufactured housing strips wealth from a family's balance sheet.

Benefits of Better Quality, More Energy-Efficient Manufactured Housing

Factors that enhance the asset-building value of manufactured housing include ensuring access to mortgages or other fairly priced financing, control of the land under the home (about 40 percent of units are sited in communities), and delivery of quality housing. By

2 CFED, "Manufacture Housing Metropolitan Opportunity" (Washington, DC, 2013). Available at http://cfed.org/programs/innovations_manufactured_homes/manufactured_housing_metropolitan_opportunity/index.html.

focusing on quality and performance through upgrades such as ENERGY STAR construction, permanent foundations, and elements of universal design, the likelihood of appreciation increases, thus building wealth in addition to substantial savings in energy costs. The homeowner is also eligible for preferred real estate mortgages that save money over the life of the loan. When the homebuyer decides to sell, the next buyer qualifies for the same government-backed financing.

So as improvements to home design and construction challenge one major concern about manufactured homes, a growing trend in manufactured home community ownership confronts another barrier to the sector becoming a true an asset-building tool: The homeowner's lack of control of the land beneath the home.

ROC USA (Resident Owned Communities), a social enterprise that CFED supports and a part of the I'M HOME initiative, works to create cooperatives when investors in a manufactured home community offer the property for sale. Researchers with the University of New Hampshire concluded in a 2010 report that owners in these cooperatives enjoy significant advantages over their counterparts in investor-owned communities, including lower lot fees, higher average home sales prices, faster home sales, and, in New Hampshire, access to mortgage financing.³ Site control also encourages homeowners to maintain and update their properties or even upgrade to newer, more efficient homes.

The stereotypes that hinder manufactured housing are rooted in its pre-1976 past. The HUD code today helps ensure good construction. There's an opportunity now to expand beyond the current HUD rules on what good design and good financing should be. Good quality housing must include energy-efficiency features, which for low- and moderate-income homeowners mean more disposable income, increased savings potential, and an increased likelihood of making the monthly mortgage payments.⁴

For both site-built and manufactured homes, energy consumption is a significant portion of a homeowner's monthly costs. For all homes, energy composes about 17 percent of ownership costs. For owners of manufactured homes, this proportion is 23 percent. This reflects, in part, the lower initial costs of owning a manufactured home. In contrast, manufactured home owners use about 35 percent less fuel than do site-built homes, which directly relates to the typical size of the units. However, measured per square foot, energy use in manufactured housing is much higher than it is in site-built homes. In addition, in older manufactured homes, families spend twice as much per square foot (\$1.75 versus \$0.87) as owners of site-built homes do.⁵ There are numerous reasons for this, and these reasons hold great potential for improving of the housing stock and enhancing asset-building capabilities of manufactured housing residents.

3 Sally K. Ward, Charlie French, and Kelly Giraud, "Resident Ownership in New Hampshire's 'Mobile Home Parks': A Report on Economic Outcomes" (Durham, NH: Carsey Institute, March 2010).

4 University of North Carolina Center for Community Capital and the Institute for Market Transformation, "Home Energy Efficiency and Mortgage Risks, March 2013" (Chapel Hill, NC: 2013).

5 Jacob Talbot, Mobilizing Energy Efficiency in the Manufactured Housing Sector, American Council for an Energy-Efficient Economy, July 2012.

As noted above, about 2 million of the approximately 7 million manufactured homes were built before 1976, when they were not subject to the HUD code. Many of these units have little or no insulation, thin roofs and walls, poor windows, inefficient heating and cooling equipment, and they are leaky.⁶ The U.S. Department of Energy's Residential Energy Consumption Survey found that manufactured homes built before 1980 consume an average of 84,316 BTUs per square foot, 53 percent more than all other types of homes.⁷ In addition, the lack of quality building standards means these units deteriorate in a way that further compromises their durability and performance. Replacing one pre-1976 manufactured home with a Next Step one will not only improve the owner's bottom line, but the environment, too: Based on industry and Department of Energy sources, Next Step found that such a replacement would reduce 2.25 tons of carbon emissions in one year.⁸

While pre-1976 homes are less efficient than their newer counterparts, as well as many site-built homes, families in manufactured housing of all vintages are less likely to upgrade their units. For example, according to 2009 data from the U.S. Energy Information Administration, manufactured homes are 72 percent more likely than site-built detached units to have inefficient single-pane windows and their owners are 28 percent less likely to have replaced windows as owners of site-built homes. This difference is not necessarily because manufactured housing residents, who are on average much poorer than other residents, do not want to reduce utility expenses. Rather, some upgrades are too costly. Manufactured housing residents are about one-third more likely than owners of detached single-family units to use energy-efficient light bulbs, a relatively inexpensive way to reduce electricity use.⁹

Many residents in manufactured housing may not see the value in upgrading or improving their units. Tenure security, and for a manufactured homeowner this means control over the land beneath the home though ownership, cooperative control, or long-term lease, also would provide the family with the incentive to improve the unit. After all, if the chance of being forced to move is high, why invest in energy-saving new windows or doors? On the other hand, if a family knows it can stay for 20 years, and it has the resources, why not?

What these data suggest is that significant rehabilitation or replacement of certain units would save owners on energy bills, if the upgrades were affordable or affordably financed. Many very low-income families would be reluctant to take on housing debt, even if it significantly improved housing quality and reduced overall housing costs. But if done fairly and transparently to the buyer, the impact can be huge.

In one case, an elderly Kentucky woman, who had spent over half her income on utilities at her pre-1976 home, replaced her unit with an ENERGY STAR home. The cost of the mortgage and the reduced utility bills together equaled less than the utilities in her old

6 Government Accounting Office, "Manufactured Homes: State-Based Replacement Programs May Provide Benefits, but Energy Savings Do Not Fully Offset Costs" (Washington, DC, March 2013).

7 Environmental and Energy Study Institute, "Energy Use in Mobile Homes" (Washington, DC, June 2009).

8 Next Step, "Next Step's Impact," (Louisville, KY:2012).

9 U.S. Energy Information Administration, "Resident Energy Consumption Survey: 2009 RECS Survey Data" (Washington, DC: 2011)

unit.¹⁰ Clearly, this result is a net benefit. And while each case is not quite as dramatic, the difference between energy costs in an older manufactured home and a new, highly efficient one, is meaningful.

A University of North Carolina study, for example, reviewed over 71,000 homes and uncovered the value of energy efficiency. Loans on ENERGY STAR homes were 32 percent less likely to default than others. And the more efficient the home, the lower the likelihood of default. This could serve as a huge motivator to policymakers and practitioners, who want to promote affordable, responsible homeownership and conservation of resources.

Barriers to Selling More Energy Efficient Homes

Accurate mortgage underwriting should ensure that total housing costs, including utilities, are manageable. No doubt homebuyers at all income levels would purchase an energy efficient home if the cost and benefits were detailed simply and clearly. A recent review of appraisal practices found that many appraisers undervalue the energy efficient qualities of a manufactured home, undermining the ability of the appraisal to serve as an effective asset-building tool.¹¹

One of the barriers to consumers embracing “green” products is entry cost, and without a means to evaluate savings over time, a potential buyer will often choose a less costly, less efficient, and less valuable home. As part of its climate change efforts, the Obama administration is considering including efficiency in the appraisal and underwriting processes of the Federal Housing Administration.¹² This is a step in the right direction, as life-cycle pricing that takes into account value built into the home through energy upgrades can provide transparency to buyers and allow them to more accurately gauge long-term affordability.

As an illustration, researchers at Washington State University determined that the purchase of a manufactured home with the most efficient features, based on the International Energy Conservation Code (IECC), the standard for most state and local site-built codes, would be paid for in less than five years through reduced utility bills.¹³ If the unit were financed fairly through a mortgage that takes into account the efficient design, the monthly homeownership costs would be lower (compared to a home financed by a chattel or personal property loan, which is the dominant financial product in the market) and the home’s appreciation greater.

10 Anne B. Gass, *Frontier Housing: Replacement Housing with Manufactured Housing Done Right*, NeighborWorks America, November 2009.

11 Robin LeBaron, Real Homes, “Real Value: Challenges, Issues and Recommendations Concerning Real Property Appraisals of Manufactured Homes”, CFED December 2012.

12 Brian Collins, “Obama Wants Underwriting to Reflect Energy Savings,” *National Mortgage News*, June 28, 2013, p. 1.

13 Emily Salzberg, Michael Lubliner, Luke Howard, Andrew Gordon, Ken Eklund, and Kelly Morgan, “Cost Implications of Retrofit vs. Replacement of Manufactured Housing” (Olympia, WA: Washington State University Extension Energy Program and Habitat for Humanity, 2012), pp. 2-32.

Changing Policy, Construction, and Finance to Overcome Barriers

Government interventions have long nudged or cajoled innovation in energy improvements. Congress uses the tax code to encourage behaviors it deemed worthy of support. In the so-called fiscal-cliff bill enacted at the end of 2012, Congress renewed, though just for a year, the Energy Efficient Home Credit, which provides builders of ENERGY STAR manufactured homes with a tax credit of \$1,000 per home. Although a temporary tax credit for a small segment of the housing market is not going to turn the economy around, its revival restated Congress' intent that manufactured housing should have better energy efficiency.

Although manufacturers are often reluctant to lead the market with costly upgrades that may turn away potential customers, they may not, in the near future, have a choice. The Energy Independence and Security Act of 2007 requires the Department of Energy (DOE) to develop energy efficiency standards for manufactured housing. Although promulgation of the rules is delayed (they were to be implemented in 2011), DOE appears to be moving forward. The department recently released a request for information to help guide their rulemaking. With some exceptions, Congress instructed DOE to base the new manufactured housing standards on the most recent version of the IECC. Although this will add to unit costs, the adoption of the rules will result in much more stringent energy standards, as it did with every innovation since the HUD code was first adopted in 1976. These shifts will broaden the money-saving, asset-building value of manufactured homes for the families who move into them.

The potential for savings is immense. According to a 2007 report from the American Society of Heating, Refrigeration, and Air Conditioning Engineers, manufactured homes built to the ENERGY STAR guidelines save as much as \$246 in annual energy costs over the current standards.¹⁴ Couple this with the potential savings that could be realized in replacing a much older home, which, as noted above could be twice this, the value of new technology is significant.

Like most industries, manufactured housing producers do not always support the regulations that govern it. Yet the industry is supportive of tougher energy standards and innovation in general. The Systems Building Research Alliance (SBRA), the industry's nonprofit research and development arm, aims to develop technology, practices, and designs to improve home quality, performance, and value. As a research organization, SBRA brings together a broad spectrum of stakeholders to spur the development of new technologies. Ultimately, these advances drive down costs as they improve overall energy performance, placing greater efficiency and lower energy bills within the reach of manufactured home buyers. SBRA operates the ENERGY STAR for manufactured homes program for the U.S. Environmental Protection Agency.

14 American Society of Heating, Refrigeration, and Air Conditioning Engineers, Inc., "National Energy Savings Potential in HUD-Code Housing from Thermal Envelope and HVAC Equipment Improvements" (Atlanta, 2007).

Next Step is using ENERGY STAR and higher standards in its programs, which will translate into meaningful savings for owners and create an appreciating asset. Based on average energy savings for ENERGY STAR homes calculated by DOE, one Next Step Home is projected to save \$360 per year on energy costs for new development, and according to SBRA calculations, one Next Step Home can save up to \$1,800 per year for pre-1976 mobile home replacement. Yet ENERGY STAR is a voluntary program, and its reach is limited. ENERGY STAR is a fair proxy for IECC, to which the new DOE rules will have to conform. The combination of new standards, mandatory adoption by industry, and the rebounding sales of manufactured homes will translate into a meaningful shift in the affordable homeownership space.

Marlette Homes, a manufacturer, already offers units that exceed the IECC standards. Palm Harbor Homes, another manufacturer, touts the savings that buyers can expect over the life of a 30-year mortgage. With a purchase of one of its highly efficient models, the firm claims that a buyer will save between 26 percent and 43 percent on heating and cooling costs, which can mean \$21 per month in Tampa and as much as \$69 per month in Amarillo, Texas.

Palm Harbor and Marlette promote these products because they believe they're good business, and they realize that the regulations will be adopted. As consumers embrace these homes, and realize the savings, the manufactured housing segment will become a bigger and better asset-building tool for American families.

Conclusion

There are several reasons why manufactured housing can emerge as a viable homeownership alternative for low- and moderate-income Americans who want to build wealth. First, the economy and the housing markets continue to rebound. Second, policymakers are likely to reshape the government-sponsored enterprises, the Federal Housing Administration, and consumer protections. Third, the industry, with the right mix of tools and oversight, is developing high-quality housing at reasonable prices. Finally, the lack of real wage growth for many Americans will require new thinking on housing options across the country.

The first three reasons can be seen as positive, depending on how any legislation plays out. The fourth, however, is decidedly negative. Wages for most Americans have been stagnant for decades, and it seems fairly certain that this trend will continue for at least the near future. Combine this trend with the fact that new site-built homes are larger than ever,¹⁵ traditional homes are now farther out of reach for many Americans. Lenders, policymakers, and advocates are looking not only for new housing options for their communities, but safe and scalable models to get there.

There is a solution: when done right, manufactured housing is affordable, energy-efficient, and appreciating, a recipe for sustainable growth, good policy, and smart lending.

15 U.S. Census, "Annual Characteristics of New Housing" (Washington, DC, June 2013).

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