



**Testimony of Trisha Miller
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For the Committee on Banking, Housing and Urban Affairs
Subcommittee on Housing, Transportation and Community Development
United States Senate**

**“Green Housing for the 21st Century:
Retrofitting the Past and Building an Energy-Efficient Future”
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Introduction

Chairman Menendez, Ranking Member Vitter, and members of the Subcommittee on Housing Transportation and Community Development, I thank you for this opportunity to testify on the Energy Efficiency in Housing Act. I am Trisha Miller, Director of Green Communities at Enterprise Community Partners (Enterprise).

Enterprise is a national nonprofit organization whose mission is to see that all low-income people in the United States have the opportunity for fit and affordable housing and to move up and out of poverty into the mainstream of American life. Enterprise provides financing and expertise to community-based organizations for affordable housing development and other community revitalization activities throughout the United States. Since 1982, Enterprise has invested more than \$10 billion to create more than 270,000 affordable homes and strengthen hundreds of communities across the country. Enterprise also works closely on a bipartisan basis with policymakers at all levels of government to develop solutions to low-income community needs.



Mr. Chairman, now is the time for federal leadership on green housing. The federal government has an important role to play in linking the benefits of the emerging green economy to low-income families and communities. Green development – energy efficient, healthy and environmentally responsible development – offers job opportunities and cost effective ways to address housing affordability challenges and rising energy, water and transportation costs, all of which disproportionately affect low-income people.

Despite recent declines in home prices, the nation faces a huge shortfall of decent, affordable housing. Currently, there is not a single county in the United States where an individual earning minimum wage can afford to rent a market-rate apartment, according to the National Low Income Housing Coalition. Nationwide, an estimated 55 million Americans live in unaffordable, overcrowded, or substandard housing.

Green development offers proven, cost effective ways to address current and longstanding housing, energy and transportation challenges. The practice of greening affordable housing gives us the ability to support and deliver healthy communities. Indeed, we can harness energy efficiency and renewable sources of energy that will lower our carbon dependency and build thriving communities.

Enterprise's Green Communities initiative leverages financing and expertise to enable developers to build, rehabilitate, and maintain housing that is energy efficient and better for the environment – without compromising affordability. Over the last five years, Enterprise has supported the



development of over 17,000 homes built according to Enterprise's Green Communities Criteria, the first national framework for environmentally sustainable affordable homes. The Criteria were developed in collaboration with and endorsed by a number of leading environmental, energy, green building, affordable housing, and public health organizations.

To date, Enterprise has invested more than \$700 million to create green affordable homes in 32 states. We have trained over 5,000 housing professionals and helped more than 20 states and cities implement greener housing policies. All state housing finance agencies have adopted portions of the Enterprise Green Communities Criteria as part of their scoring systems for awarding allocations of low-income housing tax credits.

Enterprise's vision is for all affordable housing both new and existing in the United States to be energy efficient and environmentally sustainable. Partnerships with housing providers and public agencies have led us toward innovations in green building and provided an incubator to test green methods, materials and their impact on communities and energy performance. Federal leadership can take this progress to scale. The Energy Efficiency in Housing Act represents a major step towards that goal. We commend Senator Whitehouse for his commitment and leadership in introducing the bill, which Enterprise enthusiastically supports. Both this legislation and the GREEN Act in the House represent a national commitment that would have substantial positive impacts in the housing market, especially the affordable housing sector.



The Case for Green Affordable Housing

Mr. Chairman, housing and transportation costs make up the largest share of our household budgets and quickly force low-income families into an untenable choice between life's most basic necessities. Indeed, too many families must make the difficult choice between paying the rent and putting food on the table. According to a Low Income Housing Energy Assistance Program study, a low-income household pays 4 times as much of their monthly household income on utility payments as an average U.S. household. There are roughly 25 million very low-income households with annual incomes of \$25,000 or less in the country. Roughly two-thirds of these households are renters and one-third are homeowners. For these families and individuals, the daily realities of rising energy, housing and transportation costs are intertwined.

Home energy costs have increased much faster than incomes for very low-income households in recent years, rising 33 percent since 1998. Not surprisingly, high utility bills force many very-low income households to make desperate tradeoffs. A survey of households that received federal home energy assistance during a five-year period found that 47 percent went without medical care, 25 percent failed to fully pay their rent or mortgage and 20 percent went without food for at least one day as a result of home energy costs.

In addition, low-income and minority communities are more likely to live in worse environmental conditions and experience greater rates of disease, limited access to health care, and other health



disparities. Studies have shown that negative aspects of the built environment tend to magnify these disparities. Housing conditions in particular are important factors influencing health. Specific housing hazards include exposure to allergens that may cause or worsen asthma, lead-based paint hazards, mold, and excess moisture and indoor air quality.

A study by the Center for Housing Policy (CHP; the research affiliate of the National Housing Conference) found that transportation costs are also rising, especially for very low-income families. CHP also found that families earning \$20,000 to \$50,000 spend nearly half their incomes on housing and transportation costs combined because they must drive away from job centers to where they qualify for housing that they can afford. Again, low-income families are stretched too thin.

In summary, housing, environmental, health and transportation challenges are inextricably linked for millions of very low-income households. We can make progress on all these issues simultaneously and lock in long-term benefits by making a renewed commitment to greening housing that is affordable to people with low-incomes. We can build smarter, with less of an environmental impact and with development patterns that inspire people and create choices in terms of access to jobs, schools, open space, and healthy living environments. And, most importantly, we can help all Americans find homes they can afford and feel proud to live in.

Consumer and Environmental Benefits of Green Housing



The Energy Efficiency in Housing Act signals a comprehensive approach to green housing that would bolster community and environmental benefits without imposing significant costs. Green housing can generate pocketbook savings for low-income families and create healthier living environments. When we launched Enterprise Green Communities in 2004, we set out to prove that for less than a 5 percent premium on total development costs, green buildings would return significant benefits to low-income residents through increased energy savings, water conservation, and a healthier living environment.

We engaged in an extensive and rigorous data collection effort to analyze the costs of meeting Green Communities Criteria and assess the associated financial benefits resulting from reduced energy and water utility costs over the life of the home. From a strictly financial standpoint, the projected “lifetime” utility cost savings, averaging \$4,851 per dwelling unit (discounted to today’s dollars) are sufficient to repay the average \$4,524 per-unit cost of complying with the Criteria. The average cost per dwelling unit to incorporate the energy and water criteria was \$1,917, returning \$4,851 in predicted lifetime utility cost savings. In other words, the energy and water conservation measures not only paid for themselves but also produced another \$2,900 in projected lifetime savings per unit.

Enterprise’s experience through the Green Communities initiative indicates that new and existing properties that achieve 20 percent-30 percent greater energy efficiency generate substantial cost savings from lower energy and water usage – hundreds of dollars per unit on an annual basis. This is consistent with other research on improving energy efficiency. For example, the Department of



Energy reports that Energy Star-qualified single-family homes delivered \$200-\$400 in annual savings compared to conventional homes, with potentially substantial additional savings on maintenance.ⁱ

In addition, studies of home weatherization and retrofit programs captured consumer benefits beyond lower energy and water costs, including greater comfort, convenience, health, safety and noise reduction. These “non-energy benefits” have been broadly estimated by the American Council for an Energy-Efficient Economy to be worth 50 percent-300 percent of annual household energy bill savings.ⁱⁱ

There is also mounting evidence that green homes are healthier. A targeted scientific study recently assessed the health impact on asthmatic children who moved into healthy green public housing at Seattle Housing Authority's High Point community. Asthma is the sixth-ranking chronic condition in Washington State and one of the leading chronic illnesses of children across the country. The homes in this study all met healthy housing criteria. After just one year, the results were staggering. The outcome for the asthmatic children living in these homes showed a 60 percent increase in symptom-free days and a 67 percent reduction in the use of urgent clinical care. That finding is particularly significant when you consider that the children in low-income communities are twice as likely to suffer from asthma and *one in four* emergency room visits nationwide is asthma-related.



It comes down to a basic principle: green investments in housing have the potential to improve resident health and reduce the cost of health care. A great example of measurable health outcomes associated with green housing can be seen in the Southwest MN Housing Partnership's redevelopment of Viking Terrace in Worthington, Minnesota. The green rehabilitation of 60 apartments for people with low incomes addressed core contributors to an unhealthy living environment by meeting Enterprise's Green Communities Criteria. The National Center for Healthy Housing conducted a health assessment of the development and found improvements in health and safety across the board. One resident, Abang Ojullu, spoke of the lasting impact these health measures had on her and her children. For two years, Abang made the hour-long drive to Sioux Falls once a month so her daughter, Ananaya, could see a specialist for her severe asthma. But, six months after moving into the renovated Viking Terrace Apartments, Ananaya did not get sick once, nor did any of her five other children, though in the past each had bouts of asthma. As Rebecca Morley, executive director of the National Center for Healthy Housing, noted, "instead of paying for medical care that could have been avoided, occupants in Green Communities will be able to keep more of their income and avoid the suffering and loss associated with poor health."

Currently, the Mount Sinai Department of Preventive Medicine is conducting a study investigating the effects of green housing on respiratory health of families in Melrose Commons V, a 63-unit housing property in the South Bronx. This work will focus on documenting respiratory benefits of residents after moving into an environment with improved ventilation and built with green building materials.



The Energy Efficiency in Housing Act can help improve health outcomes, while protecting our natural resources and fighting climate change. Residential units consume 22 percent of the nation's energy and cause 20 percent of our greenhouse gas emissions.ⁱⁱⁱ The 25 million units that are home to our lowest income citizens are almost one-quarter of all residential units in the country. Most of these units were built before 1980 and many were poorly constructed. Just imagine if we could rehab and retrofit all of those units. That would translate into annual carbon emissions reductions utilizing EPA's equivalency calculator of either: 60 million tons carbon dioxide (CO₂), 10 million cars off the road, or nearly 400,000 acres of forests preserved.

Increasing energy efficiency in housing would address one of the most significant contributors of greenhouse gas emissions – the built environment. One recent analysis suggest that the 34 million households eligible for federal home energy assistance generated 276 million tons of carbon dioxide emissions, 27.5 percent of total emissions from residential units overall.^{iv} Another study found that weatherizing 12,000 homes in Ohio avoided more than 100,000 pounds of sulfur dioxide and 24,000 tons of carbon dioxide, while cutting average utility costs for low-income homeowners by an average of several hundred dollars per year.^v

The Minnesota Green Communities program has concluded that once green affordable housing projects receiving state funding through 2008 are built, the reduction in emissions will be almost five million fewer pounds of CO₂ released each year – the equivalent of the CO₂ footprint of 90 to 100 average households. The Energy Efficiency in Housing Act will amplify these outcomes, and improve health and housing conditions for vulnerable communities.



Costs and Benefits of Increasing our National Stock of Green Housing

In creating Green Communities, Enterprise sought to show that all affordable housing – new construction and rehabilitations, home-ownership as well as rental, large urban developments, and small rural projects – could be green within the budgets and capacity of the typical affordable housing developer. Enterprise has demonstrated that green affordable developments can be created for little if any higher development costs than conventional projects that do not offer the same benefits. And Enterprise has demonstrated the many additional benefits of green affordable development.

Enterprise’s Green Communities portfolio represents virtually every form of housing in every type of climate in every kind of community in the country:

- New rental construction for seniors in Ewing, New Jersey.
- Single family homeownership in Blacksburg, Virginia;
- Urban infill redevelopment in New Orleans;
- Rental preservation in New York City;
- Farmworker housing in Independence, Oregon;
- Family housing in Billings, Montana;
- Public housing revitalization in Cleveland;
- Single family rehabilitation in Columbus;
- Green design with Native American communities in Wisconsin;
- Transit oriented development in Austin, Texas.



Enterprise's extensive evaluation efforts have generated data that show we can create highly sustainable homes for low-income families such as these for only marginally higher development first costs – 2 percent over total development costs – and those first costs can come down with experience. Critically, our evaluation suggests that most of the marginally higher costs are attributable to measures that generate financial savings, such as energy and water efficiency features, or enable developments integrate systems and thinking during the early design phase which has been shown to lower life cycle costs and enhance environmental performance in buildings.

Of course, there are examples of green developments that cost more than conventional developments, just as there are many non-green developments that go over budget. The point is that we can no longer allow the lowest common denominator to constrain federal leadership in the face of the overwhelming body of experience and proven benefits of green housing.

Role of Legislation

The Energy Efficiency in Housing Act authorizes HUD to apply minimum standards and bonus incentives for meeting energy efficiency and green development requirements. The minimum energy efficiency standards establish clear thresholds based on the International Energy Conservation Code (IECC) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). It would also raise the bar on building and environmental performance by encouraging new and rehabilitated development to meet more comprehensive criteria that include improved indoor air quality, reduced water use, lower environmental impact on the surrounding site, and greater access to transit. The bill addresses this issue by providing



“additional credit” for developments that incorporated comprehensive green building standards, including Enterprise’s Green Communities Criteria and the USGBC’s LEED rating systems.

One of the hallmarks of Sen. Whitehouse’s bill is that it would provide new federal resources for green housing through incentives to publicly-financed and assisted housing developments on an unprecedented national scale. These funds generally would support the incremental costs of energy efficiency improvements. The bill also would provide critical resources to build capacity and provide technical assistance to enable developments to achieve green goals cost-effectively. One especially important provision would provide funds to strengthen the capacity of community-based organizations in green development (Section 20). Finally, the bill would also spur green public housing by requiring all new HOPE VI construction to comply with the mandatory aspects of the Green Communities criteria (Section 15).

In addition to federal leadership and public investment to transform green affordable housing, capital and innovation must come from mainstream financial institutions to make major progress, and targeted federal incentives have an important role to play. The bill facilitates private-sector participation by offering mortgage incentives to reward energy and location efficient mortgages (Sections 5, 6 and 10). It would also stimulate innovation in multifamily green affordable housing by creating a competitive Energy Efficiency and Conservation Demonstration Program to green affordable homes for low-income people (Section 7).



Finally, the bill recognizes the critical importance of consumer awareness. Through a federal public education and outreach campaign on the availability and advantages of energy-efficient mortgages (Section 11), and Green Banking Centers that provide information on energy saving improvements and related funding sources and financial products (Section 22), consumers will make informed choices and increase demand for green affordable housing.

Conclusion

Enterprise commends the Subcommittee for convening this hearing at a time when we must take bold action to support communities around the country struggling to keep pace with housing and energy demands. We must green affordable housing, because the benefits for the most vulnerable among us are too important and the environmental risks too great. The Energy Efficiency in Housing Act presents an opportunity to meet this challenge by connecting critical federal housing programs with innovative financing strategies that will stimulate renewable and energy efficient technologies and create healthier communities. Together, we can build green housing and create a sustainable future. This bill would be a groundbreaking step in the right direction. We look forward to working with you to pass this bill this year.

Thank you again for the opportunity to appear before you, and I am happy to answer any questions.

ⁱ See www.energystar.gov/index.cfm?c=new_homes.nh_benefits.

ⁱⁱ Jennifer Thorne Amman, "Valuation of Non-Energy Benefits to Determine Cost-Effectiveness of Whole House Retrofits Programs: A Literature Review," American Council for an Energy-Efficient Economy (May 2006).



ⁱⁱⁱ “Income, Energy Efficiency and Emissions: The Critical Relationship,” Energy Programs Consortium (February 26, 2008)

^{iv} Ibid

^v “Testimony of Dan W. Reicher, Director, Climate Change and Energy Initiatives, Before the Senate Committee on Finance” Google.org (February 27, 2007).