

Written Statement for

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On Behalf of:

The National Association of Home Builders

To the

**United States House
Small Business Committee**

Hearing On

***“The Role of Green Technologies in Spurring Economic
Growth”***

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Thank you for the opportunity to submit testimony on behalf of the National Association of Home Builders (NAHB), which represents more than 235,000 members in the home building, remodeling, light commercial construction, and housing finance industry. My name is Andrea Lucke, and I am the 2008 President of the Home Builders Association of Greater Cincinnati. I am also the Vice President of Sales and Design for Robert Lucke Homes, one of the top 20 largest home builders in the Cincinnati-area. I appreciate the opportunity to share with the committee the progress I, and my fellow home builders, have made in cultivating green technologies within the residential construction industry.

Introduction

Our nation's small business home builders are leading the way in the growing demand for green construction throughout the nation. NAHB members currently build about 80% of all new homes in the United States and more than half of NAHB's members are currently incorporating green practices into the development, design, and construction of new units. The impact of housing on the economy of the United States is substantial – representing 16% of the U.S. GDP – and by encouraging growth in green building, our nation's home builders have the potential to profoundly affect energy efficiency and conserve precious natural resources and our environment.

NAHB members are leaders in the green building movement and have long shown an active interest in this issue area. With the help of over 850 state and local Home Builders Associations (HBAs), NAHB has worked for over a decade to cultivate the growing interest in green home building, primarily through the leadership of the small businesses in our industry. In fact, NAHB has consistently been ahead of the curve in promoting and developing energy-efficient and environmentally-friendly construction techniques for the mainstream home builder and hosted its 10th Annual National Green Building Conference in New Orleans this year.

The recent strength and growth of green building is due in large part to its voluntary nature. Builders have the flexibility to incorporate the principles of sustainable design in innovative ways. The end result is a home that is both environmentally sound and affordable to home buyers. This is especially true for small builders, who may not have the economic resources to access special building materials required under certain mandatory programs. Because of the current flexibility in green building options, smaller builders and big builders alike will be able to successfully adjust to the shifting market demand for greener homes.

Recent Growth in Residential Green Building and Remodeling

Based on a survey of NAHB home builders conducted this year by McGrawHill Construction, green building activity has steadily increased since the same survey was conducted in 2006. In 2008, 26% of builders reported at least “moderate involvement” in green building, up from 10% from two years ago. Builders also predict that at least a third of NAHB firms will be heavily involved in green building in 2009, and almost 70% of builders report they will have at least moderate involvement in building green next year. Perhaps most significantly, considering that the U.S. housing market is now in the contraction phase of the most pronounced

housing downturn since the Great Depression, 40% of builders surveyed reported that it is easier to market green homes in a down market.

Building green is about how little impact the home has on the land; how conservatively it uses resources; and how it provides healthy, safe, and decent shelter to the homeowner or renter. To that point, home builders have found that the products that are commonly the most appealing to buyers are energy-efficient products, including energy-efficient windows, appliances, and heating and cooling equipment. Buyers also like the use of certain environmentally-friendly wood products, and the preservation of open space on the lot site. The study found that builders are increasingly becoming aware of brand name green building products, showing that green building is trending toward mainstream commercialization.

NAHB remodelers also report that homeowners are increasingly turning to professionals to maximize their current home's energy performance. The most popular green remodeling items closely match the features that consumers choose to include in a new home, with energy efficient windows topping the list. In a recent NAHB Remodeling Market Index (RMI) Survey of projects completed in the first quarter of 2008, 73% of NAHB remodelers reported installing more energy-efficient windows that are insulated to prevent outdoor heat exchange. 56% of members installed high-efficiency HVAC systems, and almost half of remodeling projects included installing high-efficiency kitchen appliances. Word is getting out about newer technologies as well; 35% of remodelers reported that they installed tankless water heaters, which heat water on demand rather than throughout the day, in the first four months of 2008. This is up from just 19% of remodelers reporting they installed the same product in 2005.

Both the McGraw Hill Construction study on green building and the NAHB Remodeling Market Index Survey conclude that consumer demand for energy-efficient products is steadily on the rise. The studies also conclude that to remain competitive in the residential construction and remodeling industry, members will have to remain involved in green building, particularly in the current down market.

National Green Building Standard™

Recognizing the growing interest in green building among its members, NAHB, in collaboration with the International Code Council (ICC), initiated a landmark effort in February 2007 to establish the first national consensus standard on residential green building for the United States approved by the American National Standards Institute (ANSI). Normally, standards development processes can take a while to complete, given the extensive public input that requires full consideration. However, the need to develop appropriate strategies to address growing environmental challenges like climate change has motivated our industry to commit to a fast-tracked standards process because we believe that it simply cannot be put off any longer. Once this process is complete the Standard™ will exist as the only consensus-based industry standard for residential green construction in the country.

ANSI certification requires consensus-based decision-making, opportunity for public comment, and openness to help guarantee that the Standard™ is acceptable to all stakeholders as well as to those who regulate them. This process involves full participation from interested

parties who volunteer to sit on a Consensus Committee, and who provide advice and counsel on how to build a green home, how to verify and certify its integrity, and how to continuously update the standard to ensure improvement and rigor.

Members of this Consensus Committee include the U.S. Green Building Council, the U.S. Environmental Protection Agency, the U.S. Department of Energy, numerous city and state housing officials, product manufacturers, insulation manufacturers, architects, and some of the nation's largest production home builders. Some of the guiding principles in this Standard™ include the following:

- **Lot Design, Preparation, and Development:** Resource-efficient site design and development practices help reduce the environmental impacts and improve the energy performance of new homes. Siting that saves trees, incorporates onsite storm water retention/infiltration features, and orients the home to maximize passive solar heating and cooling are essential elements used in planning a green home.
- **Resource Efficiency:** Most successful green homes start at the design phase, which includes the selection of materials to be used in its construction. Resource efficiency also means reducing job-site waste by developing construction waste management plans, which includes recycling, and reduce normal average construction waste by at least two-thirds, thus reducing the burden on landfill space. Lastly, performing life-cycle analysis (LCA) on building materials helps determine a more accurate impact on the environment, since some materials can be renewable, but very energy-intensive when considering their transport to job-sites. The LCA process involves a “cradle to grade” philosophy and covers how the material is recovered, the product manufacturing process, the home building process, the maintenance and operation, the home demolition, and product reuse, recycling and disposal.
- **Energy Efficiency:** Energy consumption has profound impacts on our environment, from the mining of fossil fuels to the emissions of burning non-renewable energy sources. The impact of a home's energy use over time is a significant factor in how that home will impact the environment. Therefore, energy efficiency is heavily weighted in any green building program. The greatest results in energy efficiency come from a “whole systems” approach. Energy performance does not end with just increasing insulation, using renewable energy, or upgrading the HVAC equipment. Green homes must have a balance between these features and careful window placement, building envelope air sealing, duct sealing, and proper placement of air and vapor barriers from the foundation up to the attic. Once these feature are incorporated into the green home, then it will truly be high-performing, energy efficient, less-expensive to operate, and more comfortable to live in than a conventionally-constructed home.
- **Water Conservation:** Implementing water conservation measures can reduce mean per capita water usage from 64 gallons per day to 45 gallons per day. Thus, green homes are especially welcome in areas affected by long- and short-term water supply issues. Green homes conserve water both inside and outside the home with more efficient water

delivery systems, native and drought-resistant landscaping, and careful treatment of storm water and wastewater in the construction process.

- **Indoor Environmental Quality:** Health indoor environments are another hallmark of green building. Following energy efficiency, the quality of a home's indoor air is often recognized as the most important feature of a green home. Although no official authoritative definition exists of what healthy indoor air means, there are measures that green home builders can take to mitigate the effects of potential contaminants by controlling the source, diluting the source, or capturing some of the source through filtration.
- **Operation, Maintenance, and Homeowner Education:** Inadequate or improper maintenance of a green home can defeat the designer and builder's best efforts to create a resource-efficient home. Failing to change air filters regularly, or neglecting to use kitchen and bath exhaust fans in moist air, are very common mistakes homeowners make. By giving homeowners a manual that explains proper operation and maintenance procedures, includes information on alternatives to toxic cleaning substances and lawn and garden chemicals, and directs them to water-saving practices, a green home builder can help assure that the home functions as carefully as it was constructed, in an environmentally-responsible manner.

Encompassing single- and multi-family construction, remodeling and land development, the National Green Building Standard™ demonstrates the level of urgency with which the housing industry is approaching and addressing energy efficiency and sustainability issues. I am proud of the continued effort of the home building community to create the first comprehensive residential green construction standard that not only informs builders on how to build green, but also educates homeowners on how to operate their home in an energy- and resource efficient manner. What has been developed is a standard that is flexible enough to adjust to the specific resource and energy concerns in the varying climate zones around the country, while at the same time encouraging continued innovation in green technology that is already dramatically shifting the market. Green building should continue to exist in its most flexible form.

National Green Building Program

In conjunction with the first national consensus green building standard, NAHB is also establishing a national green building program to proactively contribute to efforts to reduce greenhouse gas emissions. NAHB members stepped up their national campaign to inform the public about the innumerable benefits of green building and sustainability in housing design by launching the National Green Building Program in February 2008 at the International Builders Show. In this program, there is a substantial effort to market the green building standard as an effective alternative, and to monitor state and local legislative and regulatory activity to ensure builders retain the right to choose from the myriad of green building options and are not restricted to the sole use of one branded product or rating system. Viable green alternatives exist in the market today in both residential and commercial construction.

The NAHB National Green Building Program will help home builders push the green building envelope and encourage innovation in green construction. Included in this effort are numerous promotional and educational tools for small businesses affiliated with green building. At a time when the challenge of climate change is moving people to live, work, and function in a more environmentally responsible way, we need to have options to force green building technology to its limit. NAHB's National Green Building Program will provide those options for all builders and, most importantly, will seek to inform current homeowners about how they can improve existing homes with green remodeling, making home occupation and maintenance just as efficient as new home construction.

Green Jobs Training

NAHB's workforce development arm, the Home Builders Institute (HBI), has worked aggressively for more than 35 years to provide ongoing information, job training, and educational opportunities to those interested in starting a career in our industry.

Many years ago, HBI and NAHB developed job training standards which formed the basis for curricula in six skilled trades – carpentry, electrical, plumbing, HVAC, masonry and facilities maintenance. Starting last year, HBI began the process of crafting a new green jobs training component which will be added to each trade training program. Our green jobs training modules will be based on industry standards; beginning with NAHB's currently pending Green Building Standard™.

These job training standards and curricula will also be used by high schools and community colleges job training programs around the country thanks to HBI's partnership with Delmar Cengage Learning publishers.

After more than 35 years of providing opportunities to at-risk youth and targeted populations, HBI has built a reputation as the industry's leader in skilled trades training. As our residential construction industry continues to make phenomenal strides in green building technology and consumer education, we strongly believe that the federal government's efforts to create new training programs for green jobs should be targeted to all entities with an expertise, eagerness and dedication to making green jobs training programs part of the everyday lexicon of their industry. Government sponsored programs should not be arbitrarily limited to only those which are union-based.

Through the joint efforts of NAHB, HBI and government, combined with the energy, focus and determination of thousands of young workers, we can build a greener America and continue to transform the residential construction industry.

Enhancing Green Building/Energy Efficiency

As NAHB members currently build about 80% of all new units in the United States, the nation's home builders have the ability to profoundly affect sustainability and conserve precious natural resources and our environment. One important tool for promoting residential energy efficiency and sustainability is to utilize the nation's tax code. The Internal Revenue Code

Section 45L New Energy Efficient Home Credit, which was enacted as part of the Energy Policy Act of 2005, is a key market incentive that shifts builders towards significant energy savings in new home construction. The program allows a \$2,000 tax credit to a home builder who constructs a qualified new energy-efficient home, certified to achieve a 50 percent reduction in energy usage, thereby adding a highly efficient home that will likely remain part of the nation's housing stock for 60 years or more.

Tax incentives are effective ways to promote energy efficiency because they combine the tax incentive with market-determined supply and demand for home construction. Other approaches, such as an artificially-imposed mandate, require government officials to sort through reports in order to enforce rules and verify compliance. Meanwhile, a tax incentive simply reduces the cost of construction above minimum building code requirements, i.e building highly energy-efficient homes, thereby encouraging that behavior. Further, with a tax credit, important production decisions are still reserved for builders, buyers and home owners. Consequently, a tax credit program costs little to operate and does not require expensive administrative oversight that is usually associated with a mandate.

NAHB has learned from its members that the credit is particularly beneficial to small home builders, who in many cases have the flexibility to react to marketplace preferences, such as the demand for highly efficient homes. The credit can be an effective means of developing and maturing this market, which would yield long term benefits with respect to our nation's energy needs.

Unfortunately, the credit is set to expire at the end of this year. The limited window of applicability of the credit also limits its use. Home building is a lengthy process, and builders are unlikely to participate in a program that may end before the construction process is completed. The House did not include an extension of 45L in its energy tax package – H.R. 6049, the *Energy and Tax Extenders Act of 2008*. The Senate has yet to act and there is still no agreement between the chambers over extending 45L. Furthermore, the political disagreement over offsets endangers the possibility of extending this credit this year. Unless Congress can end the political debate and extend this credit soon, it will be a tremendous loss for builders that will see an elimination of the only federal incentive for efficiency in new homes.

Finally, Congress should also increase the dollar amount of the credit. As nearly everyone agrees that energy efficiency in buildings and homes is a major priority, so similarly Congress should tackle this priority by offering a more meaningful incentive to those that bear the most cost – i.e., builders. Achieving the 50% threshold required by statute can be an expensive proposition, especially for smaller builders. Home builders report that the increased construction cost required to meet the 45L requirement can dramatically exceed the \$2,000 tax credit. In conjunction with the required basis adjustment (which reduces the value of the credit to approximately \$1300), the credit is somewhat limited in its effect. In today's market, these costs cannot be transferred to homebuyers; therefore Congress must provide a way that will help builders ameliorate the expenses associated with achieving such high levels of code compliance.

Conclusion

NAHB appreciates the opportunity to submit testimony on behalf of its 235,000 members regarding the emerging trends in energy efficiency and green building for residential construction. As Congress continues to look for ways to promote energy efficiency and sustainability, NAHB urges it to use incentives, rather than mandates, to encourage the growth of green technologies. Through NAHB's pioneering National Green Building Standard™ and National Green Building Program, our nation's home builders will continue to be at the forefront of green technology design and implementation. Small businesses in particular are at the cutting edge of pushing efficiency and sustainability technology in home construction, and NAHB looks forward to partnering with the Committee, and Congress, to promote effective policy recommendations in this exciting area.

Thank you again for the opportunity to be here today.