AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

H.R. 2336, THE GREEN ACT OF 2009, PART I

HEARING

BEFORE THE

SUBCOMMITTEE ON
HOUSING AND COMMUNITY OPPORTUNITY

OF THE

COMMITTEE ON FINANCIAL SERVICES

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

JUNE 11, 2009

Printed for the use of the Committee on Financial Services

Serial No. 111–43

U.S. GOVERNMENT PRINTING OFFICE

52–399 PDF WASHINGTON : 2009

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

HOUSE COMMITTEE ON FINANCIAL SERVICES

BARNEY FRANK, Massachusetts, *Chairman*

PAUL E. KANJORSKI, Pennsylvania
MAXINE WATERS, California
CAROLYN B. MALONEY, New York
LUIS V. GUTIERREZ, Illinois
NYDIA M. VELÁZQUEZ, New York
MELVIN L. WATT, North Carolina
GARY L. ACKERMAN, New York
BRAD SHERMAN, California
GREGORY W. MEEKS, New York
DENNIS MOORE, Kansas
MICHAEL E. CAPUANO, Massachusetts
RUBÉN HINOJOSA, Texas
WM. LACY CLAY, Missouri
CAROLYN McCARTHY, New York
JOE BACA, California
STEPHEN F. LYNCH, Massachusetts
BRAD MILLER, North Carolina
DAVID SCOTT, Georgia
AL GREEN, Texas
EMANUEL CLEAVER, Missouri
MELISSA L. BEAN, Illinois
GWEN MOORE, Wisconsin
PAUL W. HODES, New Hampshire
KEITH ELLISON, Minnesota
RON KLEIN, Florida
CHARLES A. WILSON, Ohio
ED PERLMUTTER, Colorado
JOE DONNELLY, Indiana
BILL FOSTER, Illinois
ANDRÉ CARSON, Indiana
JACKIE SPEIER, California
TRAVIS CHILDERS, Mississippi
WALT MINNICK, Idaho
JOHN ADLER, New Jersey
MARY JO KILROY, Ohio
STEVE DRIEHAUS, Ohio
SUZANNE KOSMAS, Florida
ALAN GRAYSON, Florida
JIM HIMES, Connecticut
GARY PETERS, Michigan
DAN MAFFEI, New York

SPENCER BACHUS, Alabama
MICHAEL N. CASTLE, Delaware
PETER T. KING, New York
EDWARD R. ROYCE, California
FRANK D. LUCAS, Oklahoma
RON PAUL, Texas
DONALD A. MANZULLO, Illinois
WALTER B. JONES, JR., North Carolina
JUDY BIGGERT, Illinois
GARY G. MILLER, California
SHELLEY MOORE CAPITO, West Virginia
JEB HENSARLING, Texas
SCOTT GARRETT, New Jersey
J. GRESHAM BARRETT, South Carolina
JIM GERLACH, Pennsylvania
RANDY NEUGEBAUER, Texas
TOM PRICE, Georgia
PATRICK T. McHENRY, North Carolina
JOHN CAMPBELL, California
ADAM PUTNAM, Florida
MICHELE BACHMANN, Minnesota
KENNY MARCHANT, Texas
THADDEUS G. McCOTTER, Michigan
KEVIN McCARTHY, California
BILL POSEY, Florida
LYNN JENKINS, Kansas
CHRISTOPHER LEE, New York
ERIK PAULSEN, Minnesota
LEONARD LANCE, New Jersey

JEANNE M. ROSLANOWICK, *Staff Director and Chief Counsel*

SUBCOMMITTEE ON HOUSING AND COMMUNITY OPPORTUNITY

MAXINE WATERS, California, *Chairwoman*

NYDIA M. VELÁZQUEZ, New York
STEPHEN F. LYNCH, Massachusetts
EMANUEL CLEAVER, Missouri
AL GREEN, Texas
WM. LACY CLAY, Missouri
KEITH ELLISON, Minnesota
JOE DONNELLY, Indiana
MICHAEL E. CAPUANO, Massachusetts
PAUL E. KANJORSKI, Pennsylvania
LUIS V. GUTIERREZ, Illinois
STEVE DRIEHAUS, Ohio
MARY JO KILROY, Ohio
JIM HIMES, Connecticut
DAN MAFFEI, New York

SHELLEY MOORE CAPITO, West Virginia
THADDEUS G. McCOTTER, Michigan
JUDY BIGGERT, Illinois
GARY G. MILLER, California
RANDY NEUGEBAUER, Texas
WALTER B. JONES, JR., North Carolina
ADAM PUTNAM, Florida
KENNY MARCHANT, Texas
LYNN JENKINS, Kansas
CHRISTOPHER LEE, New York

CONTENTS

	Page
Hearing held on:	
June 11, 2009	1
Appendix:	
June 11, 2009	25

WITNESSES

THURSDAY, JUNE 11, 2009

Bernstein, Scott, President, Center for Neighborhood Technology	10
Gatlin, Doug, Vice President, Market Development, U.S. Green Building Council	7
Howard, Jerry, President and Chief Executive Officer, National Association of Homebuilders (NAHB)	5
Koo, Doris W., President and Chief Executive Officer, Enterprise Community Partners, Inc.	9
Mazria, Edward, Founder and Executive Director, Architecture 2030	12
Willis, Roy, Executive Vice President, Lennar Urban (Southern California Division)	14
Wluka, David, Director, National Association of Realtors	15

APPENDIX

Prepared statements:	
Bernstein, Scott	26
Gatlin, Doug	51
Howard, Jerry	61
Koo, Doris W.	70
Mazria, Edward	82
Willis, Roy	93
Wluka, David	113

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Waters, Hon. Maxine:	
Written statement of Charles Clevenger, Delphi Corporation	123
Perlmutter, Hon. Ed:	
Written statement of The American Institute of Architects (AIA)	127
Letter from various undersigned organizations in support of H.R. 2336	136

H.R. 2336, THE GREEN ACT OF 2009, PART I

Thursday, June 11, 2009

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HOUSING AND
COMMUNITY OPPORTUNITY,
COMMITTEE ON FINANCIAL SERVICES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 2:14 p.m., in rooms 2220 and 2128, Rayburn House Office Building, Hon. Maxine Waters [chairwoman of the subcommittee] presiding.

Members present: Representatives Waters, Cleaver, Green, Clay, Ellison; Capito and Biggert.

Also present: Representative Perlmutter.

Chairwoman WATERS. I will first apologize for having to move this hearing. Unfortunately, it overlapped with the hearing that was being held by the chairman in our regular Financial Services hearing room, so we had no choice but to come to an alternative site. And so for those of you who don't have seats, I don't know what else to tell you but to stand.

Thank you for your patience, members. We just left a meeting with Secretary Donovan.

This hearing of the Subcommittee on Housing and Community Opportunity will come to order. Ladies and gentlemen, I would like to thank our ranking member and other members of the Subcommittee on Housing and Community Opportunity for joining me today for this hearing on H.R. 2336, the GREEN Act of 2009.

Without objection, Representative Perlmutter, the author of this legislation, will be considered a member of the subcommittee for the duration of this hearing.

I would like to note that this is our first hearing on this legislation. Next Tuesday, we will be joined by the Department of Housing and Urban Development, which will share its views about this legislation. I would also like to note that H.R. 2454, the American Clean Energy and Security Act of 2009, is not the subject of today's hearing. Whle I understand member interest in this legislation, today's hearing is focusing solely on the GREEN Act.

Higher energy costs are felt most acutely by low-income families. These families are likely to live in older buildings, which are usually less energy efficient. Energy costs for these families have increased much faster than their incomes, meaning that these households spend 16 percent of their annual income on energy. This is 4.4 times more than other families spend. As a result, low-income families frequently make hard choices between heating their homes and seeking medical care, paying rent, or even eating.

According to one survey of low-income households receiving Federal assistance with their utilities costs, 47 percent of families went without medical care, 25 percent failed to pay their housing costs, and another 20 percent went without food for at least one day.

It is important that green improvements do not result in higher upfront costs, especially for low-income families. This is why section 27 of the bill establishes a loan insurance fund that would help bridge the cost gap between the upfront costs of going green and the long-term savings. Mr. Willis will expand upon the importance of this provision in his testimony.

The GREEN Act contains provisions that could lead to energy savings for the low-income families served through HUD's programs. For example, the bill would address the energy consumption of residential and commercial buildings. According to the Department of Energy, the building sector is responsible for 39 percent of total U.S. carbon dioxide emissions. In addition, homes, businesses, and industries consume more than 70 percent of the natural gas and electricity used in this country.

This bill would also assist HUD, which administers the bulk of the affordable housing in this country. The Department spends an estimated $4.6 billion annually on energy—more than 10 percent of its annual budget. Energy savings of about 5 percent a year over 5 years would generate $1 billion in savings for HUD. The bill would allow HUD to achieve these savings by making its residences meet the criteria of the 2009 International Energy Conservation Code.

In addition, the bill would authorize a demonstration through Project HUD which would increase the energy efficiency of 450,000 multifamily housing units in urban and rural areas, resulting in lower utility costs for residents.

I am looking forward to hearing from our panel of witnesses on the benefits and challenges involved in implementing the GREEN Act of 2009.

I would now like to recognize our subcommittee's ranking member to make her opening statement.

Mrs. Capito.

Mrs. CAPITO. Thank you, Madam Chairwoman, for holding this hearing. I am going to abbreviate my opening statement because we are rushing up against a vote, and I know we have a lot of good panelists here.

The buzz phrase for the decade and those to come will be "going green" and the innovation and creating and manufacturing of more environmentally friendly goods, the development of building techniques that will make our homes more sustainable are all the hallmarks, I think, of American ingenuity.

I would like to thank Mr. Perlmutter for his efforts on this legislation before us today. He has worked tirelessly on this bill.

I, too, have many red flags I would like to raise. I do have some reservations about the new incentives for Fannie Mae and Freddie Mac in the bill for them to purchase green mortgages. While I support the concept, I think everyone in this room knows that these two entities are under significant duress, and I am not sure now is the time to be adding additional missions to their goals.

Additionally, the FHA will be tasked with insuring 50,000 mortgages that meet energy-efficient standards by the year 2012. Again, a very laudable goal. However, the FHA is a major market player, and their market is increasing daily, and I have concerns they are overburdened with the growing load in the FHA insurance program, as well as financial difficulties in programs such as Hickam.

So our goal, I think, should be to restore these inequities to full fiscal footing before we tweak their missions and begin to put other onuses on them that, while laudable, I want to make sure that they are firmly on solid financial footing before we go in that direction.

I also have a bit of concern in terms of representing a State like West Virginia. Sometimes we hear from our builders and our constituents that materials, expertise, and inspectors for new green building standards are not readily available in the more rural areas. I don't want to penalize people in rural areas to be able to access what I think is, as I said before several times, the laudable goal of green building.

With that, I will enter my full statement into the record. Thank you.

Chairwoman WATERS. Thank you very much.

Mr. Green, for 3 minutes for an opening statement.

Mr. GREEN. Thank you, Madam Chairwoman. I will probably yield back some time to you.

I would like to associate myself with the comments of the Chair. I am excited about this piece of legislation, and I thank you for helping us to move it such that we can get it to the Floor.

I thank Mr. Perlmutter for what he has done. He has been a real stalwart on this legislation. It sometimes takes a stalwart to get things done.

Finally, I do believe that Dr. King is right. He says that, "The time is always right to do right." This appears to be the right thing to do. If it is the right thing to do, the time is right to do right, because it is the right thing to do.

I yield back.

Chairwoman WATERS. Thank you very much.

Mrs. Biggert for 3 minutes.

Mrs. BIGGERT. Thank you, Madam Chairwoman. I would also like to thank Mr. Perlmutter for all the work that he has done. I am the lead Republican on the GREEN Act. I think it is a bipartisan effort to provide incentives for green buildings.

I think that the bill still needs a little more work, and I think we will hear that from the witnesses today. But I think it has come a long way from the original version which mandated green. That was something that bothered me.

But, speaking of mandates, I would like to mention the provisions in the Waxman-Markey bill that mandates national building codes. That is a State and local matter. For example, homeowners who don't meet the standard of the code would be charged $100 a day. I think that is outrageous. So this bill is much different from that.

And Congressman Moran of Kansas and I have a bill to provide grants to State and local agencies to update the building codes, which again is an incentive program. It is my hope that bill and the GREEN Act will be what Congress wants.

I think incentives, not mandates, for the green effort, and I, again, would like to really thank Mr. Perlmutter for working on this and I look forward to hearing from the witnesses.

Chairwoman WATERS. Thank you very much.

Mr. Clay for 3 minutes.

Mr. CLAY. Madam Chairwoman, I am going to opt out of an opening statement. I want to hear from the witnesses.

Chairwoman WATERS. Thank you very much.

Mr. Ellison for 3 minutes.

Mr. ELLISON. Madam Chairwoman, I am going to follow suit. I think that the witnesses have more powerful things to say than I do, so I will yield to them—at least this time.

Chairwoman WATERS. I place within the record, without objection, that Representative Perlmutter will be considered a member of the subcommittee for the duration of this hearing.

I shall call on him now as the author of this important piece of legislation for 3 minutes.

Mr. PERLMUTTER. I thank the Chair and I thank all the members for allowing me to participate today.

You have stated a number of the statistics as it applies to energy efficiency in housing and other kinds of real estate and properties. I am going to keep my remarks short because this GREEN Act and the process we have undergone has involved many, many different groups, and it has been a bipartisan effort.

The task force that Chairman Frank put together last year was comprised of, I think, six Democrats and five Republicans. We were able to meet on a number of occasions.

I would like the record to reflect and I would like to submit a letter signed by 37 different organizations who are supporting this bill.

I would also like to submit, Madam Chairwoman, a statement from the American Institute of Architects. They were not able to participate in today's hearing, but you may recall, Marshall Purnell, the chairman of the American Institute of Architects, testified last time.

Chairwoman WATERS. Without objection, is is so ordered.

Mr. PERLMUTTER. So I appreciate Mrs. Biggert joining me in introducing the GREEN Act, H.R. 2336. This bill incorporates bipartisan changes made in the committee last year before it passed the House and became part of the Energy Act.

I would also like to thank my colleague from Connecticut, who could not be here today, Mr. Himes, for including a new section involving green mortgage guarantees, as well as a number of others who have assisted in developing a new section on leasing of renewable energy systems.

This bill has a whole variety of pieces and parts to it. One of the parts that I think is very important is upgrading a number of multifamily units within the HUD system to energy-efficient standards and use those units as a pilot and as a comparison to see exactly how cost effective it is to make changes, whether it is windows, insulation, maybe adding renewable features to the building. I think it will be something that will assist low- to moderate-income earners because they are disproportionately affected by increases in utility costs.

So I think approaching it—and it is an incentive-based piece of legislation that has been something that I think all parties wanted to see, and we can really move forward and make our housing, our multifamily properties, more energy efficient, which will benefit all of us because it will be good for national security, good for the climate and good for jobs.

With that, I yield back.

Chairwoman WATERS. Thank you very much. I thank you very much, Mr. Perlmutter.

I will now welcome our distinguished panel. Our first witness will be Mr. Jerry Howard, president of the National Association of Homebuilders. Our second witness will be Mr. Doug Gatlin, vice president of market development for the U.S. Green Building Council. Our third witness will be Ms. Doris Koo, president and CEO of Enterprise Community Partners. Our fourth witness will be Mr. Scott Bernstein, president of the Center for Neighborhood Technology. Our fifth witness will be Mr. Edward Mazria, executive director of Architecture 2030. Our sixth witness will be Mr. Roy Willis, executive vice president of Lennar Urban, Southern California Division. And our final witness will be Mr. David Wluka, director, National Association of Realtors.

I thank you for appearing before the subcommittee today. Without objection, your written statements will be made a part of the record. I will now recognize each of you for a 5-minute summary of your testimony, starting with our first witness, Mr. Howard.

STATEMENT OF JERRY HOWARD, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL ASSOCIATION OF HOMEBUILDERS (NAHB)

Mr. HOWARD. Thank you, Madam Chairwoman, Ranking Member Capito, Mr. Perlmutter, and distinguished members of the subcommittee. I am Jerry Howard, the president and CEO of the National Association of Homebuilders. Thank you for the opportunity to give our thoughts on the impact of H.R. 2336 on green building, energy efficiency, and affordable housing.

Mr. Perlmutter, Mrs. Biggert, we appreciate the ongoing input that we have been allowed to have into the GREEN Act. There are some very ambitious and well-intentioned proposals in the bill that encourage green building and energy efficiency within the government housing programs.

NAHB appreciates the incorporation of many of our ideas and feedback into the final bill, and we believe the bill generally promotes green building and sustainability in a manner that is reasonable and largely voluntary.

While there are some areas that NAHB believes would benefit from additional clarification, NAHB supports the approach and intent of the legislation.

The GREEN Act proposes many new programs covering everything from revamping appraisals to encouraging advanced renewal energy systems in housing. The legislation also provides much broader flexibility in achieving green building compliance for additional credit, and includes the recognition of the NAHB ICC National Green Building Standard, which is the only national standard to earn approval from the American National Standard Insti-

tute. It is the technical benchmark for green building in the residential arena. NAHB supports enhancing energy efficiency and green in both new and existing housing.

As outlined in my written statement, there are some provisions in the bill that would benefit from additional clarification. For example, it is difficult to determine which energy requirements would apply to FHA-insured mortgages. Also, section 13 appears to require mandatory energy ratings, again with potential implications for FHA, which we believe may impair the use of the program during a period of critical housing recovery.

Additional details on those two areas, for example, would provide clarity for both the industry and HUD when making determinations about appropriate energy strategies for the various programs under HUD's discretion and administration.

Despite our overall support for the direction of the GREEN Act, NAHB is very concerned about the implications of other legislation and how it will conflict with the goals and potential success of this bill. The major climate and energy policy bill recently passed by the House Energy Committee, H.R. 2454, contains building energy provisions that greatly exceed the goals and incentives contained in the GREEN Act. In section 201 of H.R. 2454, new Federal energy code mandates are established that would bypass green building entirely and increase the cost of housing in a manner that does not consider affordability and could impede economic recovery in our sector. Because green building is more than energy efficiency alone, it is impossible to accommodate the broader sustainability framework of green into the narrow energy code mandates.

Furthermore, section 201 of H.R. 2454 makes it unlawful to occupy a home or building that does not meet an aggressive energy threshold by a certain date. Buildings and building owners would be subject to civil penalties and violations if homes and buildings do not meet the Federal mandate. And States that choose not to adopt the codes that are equally as stringent as the Federal minimums would not only lose their emissions allowances and our Federal funding, but will also have the new Federal code applied and enforced by DOE within 1 year.

As NAHB understands it, the intent is to include the GREEN Act as part of the larger climate change bill. It will be incredibly important to assess the disconnect between what the broader bill is seeking for building efficiency and what the GREEN Act is trying to do to promote efficiency sustainability, and provide cost-effective ways to help families access affordable, energy-efficient housing.

I am hopeful this committee will be able to restore the balance necessary to truly incentivize green building and preserve affordability as the debate over climate change continues. It would be terribly disappointing to see the good-faith effort and collaborative work on the GREEN Act displaced with unworkable Federal mandates such as those envisioned in H.R. 2454.

NAHB urges Congress to be consider the negative impacts this approach will have on both housing and sustainability and work to remove such policies from the legislation.

Lastly, I would like to mention that I have responded to the questions presented to me in the letter of invitation, and those re-

sponses are detailed in my written statement. We appreciate the opportunity to provide this input, and look forward to working with you, Madam Chairwoman, Mr. Perlmutter, Mrs. Biggert, and Mrs. Capito to see that this bill gets through the full committee and to the Floor. Thank you very much.

[The prepared statement of Mr. Howard can be found on page 61 of the appendix.]

Chairwoman WATERS. Thank you very much, Mr. Howard.

I am not going to go to the next witness at this point. They have called a vote on the Floor. And while normally we would stay up until the last 5 minutes or so, I am going to use this time to recess so that you can all reconvene in Room 2128; it is now free. I can't stand to see these people standing over here looking so uncomfortable and this room being so crowded.

So we will go take the vote. We will see you back down in Room 2128. Thank you very much.

[recess]

Chairwoman WATERS. The subcommittee will reconvene. We just heard from Mr. Howard.

Mr. Gatlin, you are next for 5 minutes.

STATEMENT OF DOUG GATLIN, VICE PRESIDENT, MARKET DEVELOPMENT, U.S. GREEN BUILDING COUNCIL

Mr. GATLIN. Chairwoman Waters, Ranking Member Capito, and Congressman Perlmutter, on behalf of the U.S. Green Building Council's 20,000 company and organizational members, and nearly 80 local chapters, thank you for the opportunity to testify about the role that the Department of Housing and Urban Development and the Federal Government overall can play in residential building.

My name is Doug Gatlin and I am vice president of market development for the U.S. Green Building Council. It is a national nonprofit responsible for healthy and profitable building; and our organization and members manage and own the LEED green building rating system through which more than 38,000 spaces have either been third-party certified or are in process of achieving certification.

With the housing crisis, the economic downturn, and climate change on the horizon, stakes have never been higher and are even more so for low-income communities. Much as our economy struggles to retain its footing, the Nation's low-income households are paying on average 19.5 percent of their income on utilities, while the average median household spends 4.6 percent. HUD spends more than $5 million annually in direct and indirect utility costs.

The price of inefficient building is significant and the need for action is clear. By addressing the whole building, from construction materials to cleaning supplies, green design and green operations generate opportunities to significantly reduce operating costs, emissions, and environmental impacts. But sustainability is not limited to environmental performance alone. Rather, it hinges on the creation of buildings and neighborhoods that are socially and economically sustainable. As such, USGBC strives to integrate the practices of social and economic justice within those of sustainable building and, among other efforts, USGBC is providing education targeted to the affordable housing industry about best practices for

developing green, affordable housing, including a newly developed 3-day affordable housing summit at our annual Greenbuild Conference.

Across the country, projects are demonstrating the real benefits of green affordable housing. To date, 4,000 affordable units have registered with USGBC's LEED for Homes system, and affordable housing units account for fully 37 percent of the 2,200 units that are already certified nationwide through LEED for Homes.

Green building practices can directly benefit affordability. This is most clearly demonstrated by a particular nonprofit housing development in Michigan where two otherwise identical buildings, differing only in that one was built to LEED standards and the other was built with standard design and construction methods. Over 2 years of operations, the owner has documented 26 percent savings on electricity and 41 percent savings on natural gas for the LEED-certified project. Public housing agencies have documented similar successes, and often through HUD's energy performance contract process this has been made available. Nationally, nearly 200 energy performance contracts have been undertaken by public housing agencies, resulting in savings of approximately $50 million annually to HUD thus far.

Importantly, green building can offer health benefits as well. Residents of low-income housing are frequently children, seniors, and individuals with chronic health problems, some of our most vulnerable citizens. With an emphasis on the use of nontoxic materials and proper ventilation, green building targets improved indoor air quality for residents. HUD is undertaking research in partnership with the Centers for Disease Control and Prevention to further quantify these links.

As the administrator of billions of dollars in grant funds, HUD plays a critical role in both defining and delivering affordable housing nationwide. By leveraging the purchasing power of taxpayer dollars to support green efforts, HUD can forge a greener, more efficient, healthy and prosperous path for our Nation's public and assisted housing.

The GREEN Act establishes minimum energy efficiency standards for HUD-assisted housing and promotes the creation of incentives for advanced energy efficiency and green building. The Act promises to spur advances by providing needed financing mechanisms, supporting States and localities in improving energy efficiency of homes and creating jobs through the Residential Efficiency Block Grant Program, and providing education through green banking centers.

Additional efforts can help to ensure that the promise of the Act is realized. For example, the Act identifies energy efficiency in green building standards as tools for improving the performance of HUD-assisted facilities. HUD will need to take proactive steps to verify these projects.

Thank you again for your leadership in convening this hearing. We look forward to working with the committee and others to green our Nation's houses.

[The prepared statement of Mr. Gatlin can be found on page 51 of the appendix.]

Chairwoman WATERS. Thank you very much.

Ms. Doris Koo.

STATEMENT OF DORIS W. KOO, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ENTERPRISE COMMUNITY PARTNERS, INC.

Ms. KOO. Thank you, Chairwoman Waters, Ranking Member Capito, and members of the committee. Thank you for the opportunity to testify on the GREEN Act. I want to send an especially grateful note to Representative Perlmutter for his passion and continued leadership on this issue.

I am Doris Koo, president and CEO of Enterprise Community Partners, a national nonprofit that has invested over $10 billion to create 250,000 homes in low- and moderate-income communities over the last 25 years. We are bringing the benefits of green building to low-income people at an unprecedented scale through our Green Communities initiative.

Our Green Communities criteria were developed in collaboration with and endorsed by leading environmental, energy, green building, affordable housing, and public health organizations. In less than 5 years, Enterprise has invested more than $650 million to create more than 14,500 Green Communities homes in over 350 developments. Our vision through this initiative is for all affordable housing in the United States to be environmentally sustainable. Greening can and must be achieved without compromising and sacrificing affordability.

The case has been made. In addition to the compelling statistics cited by Chairwoman Waters in her opening remarks and many of the statistics shared by the previous speaker, we want to emphasize that greening affordable housing is instrumental in bringing better health to low-income children and families who are more prone to suffering from adverse health hazards, including exposures to allergens that might cause or worsen asthma, lead-based paint hazards, mold, and excess moisture and indoor air quality.

There is a report from the Congressional Black Caucus Foundation which cites that African Americans are "disproportionately burdened by the health effects of climate change," including increased death from heat waves in extreme weather, air pollution, and the spread of infectious disease.

We can and must make progress in all these issues—housing, transportation, and climate change—simultaneously, by locking in the long-term benefits and investing in green, affordable homes.

Many speakers have cited the benefits of going green. They largely fall into three categories: cost savings, as you heard from the previous speaker; health benefits—I want to give a specific example.

A recent study was commissioned by Enterprise in cooperation with the Seattle Housing Authority and the King County Public Health Department and the University of Washington. The subject of the study is High Point, a Hope VI, green, affordable housing project that was funded and built through Hope VI and other funding, including Low-Income Housing Tax Credits. We singled out 60 rental housing units and worked with the King County Public Health Department to make them into breathe-easy housing by screening and giving preferences to public housing families with children suffering from asthma to occupy these new units.

We did a long-term study and in less than 3 years we showed that the number of emergency room or urgent doctor visits have dropped by two-thirds. Children suffering from asthma saw an increase of symptom-free days from the old statistic of 7 days for every 2 weeks, to 12½ days in a 2-week period—almost a 65 percent increase of symptom-free days. And caretakers themselves reported an increase in the quality of life, not to mention missed days of work and school.

These findings totally support the initiative under the GREEN Act. We applaud the committee for recognizing the cost and benefits of green affordable housing and for holding a hearing on this legislation.

We want to cite the three reasons why this bill is so important. One, it sets the bar by requiring HUD to go green and adopt minimum building standards, with rewards for higher performance. Two, it creates a system of rewards, incentives, and education by providing resources to help States and municipalities to subsidize energy efficiency of single and multifamily housing and capacity-building grants to help increase the knowledge and know-how of doing energy sufficiency, as well as a revolving loan fund for States that carry out renewable energy retrofits. This is the kind of Federal commitment we need and want to see.

But we also wanted to stress that these incentives must be shared equally with owners and tenants, so that tenants can live healthy and live green and access the good jobs that can be made available.

We applaud your effort, Chairwoman Waters and Congressman Perlmutter, and we want to work with you and the committee to pass this bill this year. Thank you.

[The prepared statement of Ms. Koo can be found on page 70 of the appendix.]

Chairwoman WATERS. Thank you very much.

Mr. Scott Bernstein.

STATEMENT OF SCOTT BERNSTEIN, PRESIDENT, CENTER FOR NEIGHBORHOOD TECHNOLOGY

Mr. BERNSTEIN. Thank you very much, Chairwoman Waters, Congressman Perlmutter, Ranking Member Capito, and other cosponsors and committee members.

I am Scott Bernstein, president of the Center for Neighborhood Technology in Chicago, an urban sustainability innovations group; chairman of the Surface Transportation Policy Project; and secretary of the Institute for Location Efficiency.

We support the entire bill, but today I want to focus my remarks in particular on the important mortgage provisions that were referred to earlier by sharing some research that has been going on for 20 years, some with Federal support; and it has been recently vetted and peer-reviewed by the Transportation Research Board of the National Academy of Sciences.

I also want to directly address the question the chairwoman posed on the impact on low- and moderate-income people and people of color during this testimony.

First of all, transportation expenses are often talked about, and transportation emissions is number two after buildings. From a

household point of view, transportation can be 3 to 5 times as expensive as the cost of home energy. So it is not a favor to low-income people to not include the consideration of transportation and energy in these considerations.

This impenetrably dense equation actually allows us to map this right down at the census block group level. Nobody will get tested on this, but by this curve, it is shown that the denser and more convenient the community, the lower the transportation demand and, therefore, the lower the expenses. And this has now been proven to work for all 337 metro areas in the United States. So, the same curve works for carbon.

Now what it shows is that if you map it as vehicle miles traveled, you get a certain pattern. This is Chicago. Those light color areas are the places that are transit oriented, more densely populated. There is much less travel. Those are also the places that, when gas prices spiked last summer, were paying as much as $4,000 less per household just on the price of gasoline alone.

If you map it a different way and ask how much would somebody save if you had one less car per household, those green areas, people are saving—people earning less than $50,000 a year are saving 10 to 20 percent of their disposable income.

So we asked, what if you could take that into account in mortgage underwriting? We formed a partnership in the 1990's with the Natural Resources Defense Council, NSTPP, partnered with Fannie Mae, demonstrated something called location-efficient mortgages. And what we asked was—and this is to the point of your question, chairwoman—what would the impact be on lower-income people?

The green line on the top says that white heads-of-households in Chicago right now can easily afford a median-income home in Chicago. With no extra energy or location benefit at all, they can easily afford a $300,000 household if they are a median-income household.

The median-income home is $247,000, which is more than either Hispanic or African-American households could afford. Hispanic households earning $46,000 per year—that is the median in Chicago—if they can count on $245 a month in monthly savings from energy and location efficiency, can afford the median-income household. And African-American households, if they can count on $515 a month, can afford the median-income home. And, importantly, one less car per household saves $475 a month after you have paid for 2 monthly transit passes. So there is a tremendous potential uptick here.

We tested this. There were 2,000 mortgages made at about a dozen communities under names like "location-efficient mortgages," "smart-commute mortgages." I like the Tribune comment, "Skip the car, buy a house." It was a safer way of lending.

Whereas some people said—and I won't go through the numbers—that this would, as somebody pointed out, stress Fannie and Freddie, in fact, out of 2,000 mortgages, there was one default. It outperformed the marketplace, and it continues to outperform the marketplace. So we think this wasn't stressing Fannie and Freddie. This is a possible solution to a lot of the foreclosure crisis.

The second thing we found is the drive-until-you-qualify pattern is alive and well in every region of the country; 10 to 15 miles out

from the center of every city, the price of housing drops precipitously, but the cost of transportation goes up to pay for the extra car or two or three.

We created a new index of housing affordability that takes transportation into account. And the map on the left says that in those cream-colored areas, a median-income household can afford to spend 30 percent or less for housing. The map on the right says that if you add the cost of transportation, that cream-colored area shrinks up and you have about 30 percent fewer homes that are affordable as a result in Chicago, Portland, Washington, Denver, Los Angeles, Columbus, New York City, etc.

And the foreclosure map shows what you might expect from this, too. So the bottom line is that the right elements are in this Act, and that is why you ought to pass it, but then keep improving it. The consumer education stuff in particular is extremely important. The demo programs we have show people saving money at a rate 5 times as fast due to this.

I thank you very much for the opportunity to testify and look forward to working with you on continuing to improve it.

[The prepared statement of Mr. Bernstein can be found on page 26 of the appendix.]

Chairwoman WATERS. Thank you very much.

Our fifth witness is Mr. Edward Mazria.

STATEMENT OF EDWARD MAZRIA, FOUNDER AND EXECUTIVE DIRECTOR, ARCHITECTURE 2030

Mr. MAZRIA. Thank you, Madam Chairwoman, Ranking Member Capito, and members of the subcommittee. Thank you for inviting me to testify.

I am here to propose an addition to the GREEN Act that would dramatically increase its impact. We all know that unemployment is now at 9.4 percent, but what most people don't realize is that construction unemployment is at 20 percent. There are 1.7 million construction workers out of work right now. The average income for construction workers is about $35,000, so when we put somebody out of work, it puts them into the category of poverty.

What does all this have to do with the GREEN Act? The building sector is comprised of two parts: the public building sector, which is 7 percent; and the private building sector, which is 93 percent. The public building sector, last year, was actually up in construction by 2 percent. The commercial part of the private sector was down 7 percent, and still going down today. The private building sector was down over 40 percent from March of this year to March of last year, 66 percent, March the year before, and 75 percent, March the year before that. It is dramatically reduced.

The private building sector basically supplies a lot of the tax dollars for the public building sector. That has been shrinking.

So the stimulus is meant to do two things: Keep the public building sector from exacerbating the situation and driving down interest rates to bring back the private building sector. But it hasn't done that. We just see a re-fi frenzy, and very little construction going on.

So, the private building sector is essentially driving down the entire U.S. economy from steel and metals to glass and professional

services. We will need a second stimulus if we don't bring the private building sector back.

So what we are here to propose is a plan to do just that, to bring the private building sector back, to bring back the tax base. The way we see doing that—first, what happens when Federal dollars are spent and put into public infrastructure projects?

Let's just take $30 billion. If we put $30 billion in, we get $30 billion worth of construction, because it is basically supplementing the tax base; we get half-a-million jobs; $2 billion goes into State and local government taxes; and about $6 billion goes back to the Federal Government, about 20 percent.

What if we put the money into the private building sector? If we take that $430 billion and we leverage it, we get $296 billion worth of construction. We get 4.5 million new jobs, we get $20 billion going into State and local government coffers, and the government gets paid back double its investment, $60 billion.

So how does it work? We are calling for a mortgage rate buydown tied to efficiency performance measures and a minimum homeowner investment in construction in those measures. So you can't get the buydown unless you build. We are calling for existing buildings and location-efficient mortgages down from 4 percent to 2.5 percent if you meet an energy efficiency rating of HERS 70 all the way down to net zero for the best rate.

If we take a 3 percent mortgage, and you have to reduce your energy consumption by 75 percent, we will illustrate how lucrative that is: To get a 3 percent mortgage, if you had a $250,000 mortgage, you would have to put $40,000 in renovation costs in efficiency in your building.

If you take a $240,000 mortgage at 6 percent, the person, let's say, has $30,000 in equity, so he owes $210,000; he is paying $1,400-plus a month. He is not going to put $40,000 into his building into construction, but if you give him a 3 percent rate, if you buy the rate down to 3 percent and he adds the $40,000 into his $210,000 what he has left on his mortgage—he has to borrow $250,000—he is now at less than just over $1,000 a month. So he saves over $300 a month, another $158 in energy efficiency, so he is saving over $545 a month. That is more money in his pocket.

So by putting money into public infrastructure versus private building, if you put it into private building, you get $296 billion worth of construction, you get 4.5 million jobs, you get $20 billion going into State and local government coffers, you get $60 billion coming back to the Federal Government, double its investment.

And so what you have done is, you have brought back the building sector; you put people back to work; you have helped people stay in their homes, because as Scott said, their average outlay is a lot less now; you have reduced their monthly mortgage; you have reduced their energy bills; you have increased their disposable income; you have brought back the Federal and local tax base; and even, importantly, you have basically helped a Nation with its energy consumption and greenhouse gas emissions.

Thank you.

[The prepared statement of Mr. Mazria can be found on page 82 of the appendix.]

Chairwoman WATERS. Thank you very much.

Mr. Roy Willis.

STATEMENT OF ROY WILLIS, EXECUTIVE VICE PRESIDENT, LENNAR URBAN (SOUTHERN CALIFORNIA DIVISION)

Mr. WILLIS. Chairwoman Waters, Ranking Member Capito, and members of the subcommittee, my name is Roy Willis. I am executive vice president of the Southern California Division of Lennar Urban, a part of Lennar Homes, one of the Nation's largest homebuilders.

Chairwoman Waters, I sincerely appreciate the opportunity to testify this afternoon. In many ways, this hearing and the questions you have sent me touch on some of the most important aspects of my life's work: urban redevelopment; affordable housing; and support for low- and moderate-income families.

In these capacities, I have worked for the National Neighborhood Reinvestment Corporation to bring capital to blighted areas. I have also worked 12 years for the Community Redevelopment Agency of Los Angeles, where I had the privilege of working with you, Chairwoman Waters, and others to help revitalize Watts in South L.A. after the civil disturbances of 1992. I have also worked as a developer for the past 10 years with Lennar.

And I know that you share my hope to bring clean, renewable and, most importantly, affordable energy to all neighborhoods. To that end I would like to focus my comments in this limited time on two areas.

First, I would like to discuss section 27 of the bill, the renewable energy leasing provision; and second, directly respond to your questions of how this section of the bill would affect low- and moderate-income households and communities.

Section 27 of the bill will greatly expand the ability of Americans to enjoy the benefits of renewable energy such as solar in their homes. As we all know, it takes green to go green, and in today's trying economic times, many simply cannot afford the upfront costs of buying assets like solar panels even with the current level of Federal and State incentives.

At the same time, private investment, both debt and equity, have had a difficult time investing and leasing on a large scale because there is no established value of those assets over time. The result is a delay in the adoption of these clean technologies when we need them most. In short, we need to make going green cost less green.

Section 27 can fix this by establishing a loan insurance program paid for entirely by user fees. H.R. 2336 would set a baseline for a renewable energy system's long-term value, laying the foundation for private investment.

The result would be transformational. Leasing would become a reality, clean technology investment would resume, companies would sell more, jobs would be created, our environment would benefit and all at no cost to the taxpayer.

To put it in perspective, if just 500,000 homes included solar energy systems, that would mean saving the equivalent of 6.6 billion barrels of oil annually, reducing carbon emissions by the same amount as removing 440,000 cars from the road, producing the energy equivalent to 3 new nuclear power plants and creating 35,000 jobs.

Chairwoman Waters, with your permission, I would like to submit for the record a more detailed analysis of how renewable leasing would work.

I also mentioned earlier in my testimony that the renewable leasing provision carries no cost to the taxpayer. Chairwoman Waters, with your permission, I would like to submit for the record an analysis we commissioned by former Congressional Budget Officer Office Director Douglas Holtz-Eakin. He concluded, "This will not be a budget buster."

Chairwoman Waters, you asked for a comment on how this bill would benefit low- and moderate-income households and communities. Section 27 would have a big positive impact in these communities for two reasons. First, leasing makes the enjoyment of capital-intensive assets affordable for all. Leasing has been successfully used in other industries like automobiles and satellite television.

Second, with unemployment at double-digit levels in much of the country and low-income people, particularly, feeling the impact of the recession, the increased demand for these systems would create thousands of green, clean-tech jobs.

Chairwoman Waters, we believe renewable energy leasing is a cornerstone in the next generation of economic development, prosperity, environmental stewardship for American families. Thank you for the opportunity to testify. I look forward to answering your questions and to working with you and the committee.

[The prepared statement of Mr. Willis can be found on page 93 of the appendix.]

Chairwoman WATERS. Thank you very much. And without objection, your submissions will be made a part of the record.

Mr. WILLIS. Thank you.

Chairwoman WATERS. Finally, we have Mr. Wluka, director, National Association of Realtors, and you may correct me on the pronunciation of your name.

STATEMENT OF DAVID WLUKA, DIRECTOR, NATIONAL ASSOCIATION OF REALTORS

Mr. WLUKA. It is quite correct, Madam Chairwoman. Thank you very much. I spend my life pronouncing it for people, and getting to hear it right is very nice.

Chairman Waters, Ranking Member Capito, Congressman Perlmutter, and members of the subcommittee, thank you for the opportunity to testify on H.R. 2336, the Green Resources for Energy Efficient Neighborhoods Act.

My name is David Wluka. I am a broker-owner of Wluka Real Estate Corporation in Sharon, Massachusetts. I am the 2009 Chair of the National Association of Realtors State and Local Issues Committee, a member of the Global Climate Change Presidential Advisory Group, and a member of the GSE Presidential Advisory Group as well. I am also EcoBroker certified, which is a designation that predates NAR's new green designation for its members.

I am here to testify on behalf of NAR's 1.2 million Realtors on the Green Act, and then I would like to briefly comment on H.R. 2454, the American Clean Energy and Security Act, because the

possibility of its distraction from our undercutting the goals of the Green Act are very real in our opinion.

NAR is extremely committed to advancing energy efficiency in homes and buildings across the country. For several years, NAR has taken a number of important steps like building the first LEED-certified office building in the District. We have developed extensive member education programs such as our Smart Growth program, which I chaired several years ago and is one of the most extensive Smart Growth programs in the Nation, and a new Green designation for Realtors, which has enrolled 3,600 members just since last November, with 1,700 already completing the course work.

Realtors believe the overall mission of the Green Act, which is to promote and provide incentives for energy efficiency in the housing industry, is smart and right on target. While we do have technical concerns with some of the Green Act's provisions pertaining to appraisals, establishing a secondary market for energy mortgages for the GSEs and how "HUD assistance" is defined, we do applaud many of the provisions in the bill. Let me outline a few.

First and most importantly, we support section 9, which provides for education and outreach to homebuyers and homeowners. The GSEs and the FHA have both offered energy-efficient mortgages for a number of years, but the programs have failed to flourish. We believe increasing public awareness of those products will go a long way in promoting their use. Realtors are well-positioned to assist in this effort and would be happy to be advocates in the campaign.

Second, NAR supports the incentives in section 3, the additional credits provided in section 4, the demonstration projects in section 5, and the pilot programs in section 14 that encourage homeowners to make their property more energy efficient. This bill actually facilitates behavior change while creating jobs and reducing energy costs for consumers.

Lastly, we support section 17 which melds housing strategy with transportation planning, so residents of affordable housing have access to public transportation.

In addition to discussing the Green Act, I would briefly like to comment on H.R. 2454, which has been referred to this committee, and we are very much concerned with its revisions to create an energy labeling system.

We believe this system will only impose burdens on consumers and on our already troubled housing market without actually improving energy efficiency in homes and buildings in a timely manner. We feel the label will stigmatize all the properties and further reduce property values. This is especially troublesome, as a disproportionate share of these older and historic properties are owned by elderly and low-income Americans who can least afford to make changes to their properties.

We also are concerned with the timing of disclosing an energy label. Our members' experiences tell us that labels will become just another bargaining chip at the closing to negotiate down the selling price without making any energy-related improvements to the home or the building. In short, this is a stick when we are in desperate need of the kinds of carrots that are in the Green Energy Act.

We respectfully urge the committee to strike this labeling section of H.R. 2454 in favor of retaining retrofitting incentive programs in section 202 of that bill, along with the applicable provision of the Green Act as the most effective means to improve energy efficiency in America's home and buildings. This is a critical housing issue, this is a critical economic development issue for our Nation, and therefore, we believe it is worthy of this committee's review and comment.

In conclusion, NAR believes the Green Act has the capacity to encourage a culture of energy efficiency and a conservation-minded approach to housing and construction. Realtors are on the front lines of the housing and commercial real estate business. And we look forward to working with you to help make the American dream of homeownership friendlier to the environment.

Thank you for the opportunity to testify today, Madam Chairwoman. And I am ready to answer your questions.

[The prepared statement of Mr. Wluka can be found on page 113 of the appendix.]

Chairwoman WATERS. Thank you very much.

I would like to thank all of you for appearing before the subcommittee today. And without objection, your written statements will be made a part of the record.

And also, the Chair notes that some members may have additional questions for this panel which they may wish to submit in writing. Without objection, the hearing record will remain opening for 30 days for members to submit written questions to these witnesses and to place their responses in the record.

Now, I would like to recognize myself for 5 minutes for questions. I want to make sure that I have time for Mr. Perlmutter before he has to leave. I simply want to discuss funding and what opportunities the average homeowner will have to do retrofitting and to place energy systems in their home.

I was talking with some of my staff, who would like to do solar, but the upfront capital cost is just more than they are prepared to bear at this time.

You talked about, it takes green to make green, Mr. Willis; and of course, that phrase caught all of our attention. What were you talking about? And were you basically referring to the upfront cost and the increased cost and what is available by way of loans, insurance, etc.?

Would you explain to us what you were talking about?

Mr. WILLIS. Yes, Chairwoman Waters.

The first part of what I was talking about was, currently, in order to have solar, for example, there is that high upfront cost. People might have to come up with $20,000 or $25,000; and especially in most low- or moderate-income areas, people don't have that kind of money up front and therefore they do not take advantage of these solar panels which could help them to lower their utility costs, for example.

The second part of what I meant was that you need private capital. Oftentimes, the government can just have an initial catalytic step in helping to make sure that instead of having to put money up front. With a leasing program, homeowners will not have to pay that upfront cost and they will pay a modest monthly cost. That

way they can get the benefits of the solar panels. Leasing, whether it is leasing an automobile or, let's say, satellite television, you don't have to put up a lot of money; you just have a lease and pay a little bit on a monthly basis. And that certainly would be very helpful to low- or-moderate-income families.

That was the essence of what I meant. A large number of people want it, would benefit from it, but don't have that upfront money. And what this section 27 deals with is, let's figure out how to get a leasing mechanism that brings in a tremendous amount of private capital to get the solar panels installed and operating, and people can just pay a small amount on a monthly basis that would be less than their present cost of utilities.

Chairwoman WATERS. Thank you very much.

I am going to yield to Mr. Perlmutter, because I know he has to be someplace else at 4:30, so that he can, as the author of this bill, get in his comments and/or his questions.

Mr. PERLMUTTER. Thank you, Madam Chairwoman. And I just appreciate the testimony of all the witnesses.

Thanks. I know some of you traveled from a long way, and I just appreciate that. I am just going to make a couple of comments and allow the other members to ask questions.

But to your concern, Madam Chairwoman, there are several approaches within the bill. Some of it involves loans, so either a first mortgage or a second mortgage loan. And Ranking Member Capito focused on one.

Fannie Mae and Freddie Mac are given an additional credit if they buy either an energy-efficient mortgage in the secondary market or a location-efficient mortgage in the secondary market, the belief being that if a homeowner manages their utility costs or their transportation costs, they are a better credit risk, so both from—that they have more disposable income at their disposal. They have more income at their disposal, so there is a lower—potentially lower mortgage as part of this.

Secondly, there is—and it can be either a first or second mortgage, there is a piece in the bill that just is a Federal program looking at HUD properties to make them energy efficient. So both, it would be Federal monies there.

What Mr. Willis was just referring to was a different kind of financing approach, which is to use a lease program which would be initially—there would be either the solar company or a lease company would keep an easement on the roof of the house, would lease the solar system—or it could be geothermal or some other kind of renewable energy system within the home—would lease that to the homeowner at, say, $40 a month, but their energy savings would be $80 a month. So net-net to the homeowner, there is—one, they had no upfront cost, but now they are saving money on a monthly basis.

Where the government comes in is, we would ensure towards the back end of the lease. That is where the government's role would play.

There is—Mr. Himes has a section in here on loan guarantees through FHA and a number of other vehicles, again going back to the loan side, to try to use some leverage to help folks get into energy-efficient and location-efficient housing, because we know in

the long run we are all going to be better off, particularly the homeowner.

So those are kind of the purposes and the financing vehicles within the bill. And if anybody else wants to jump in, but those are the key pieces within it. And then we take into consideration landscaping and appraisals and a whole variety of other things.

Mr. Mazria has a much bigger proposal to us, which is, if we took some, in effect, stimulus money or something like that and really put it down into a buydown of mortgages that then include energy-efficient homes, we really can extend that to jobs and substantial savings and, ultimately, a bigger tax base.

So I just thank you for having this hearing, for giving me a chance to participate, and now I am going to go to the Rules Committee. Thanks.

Chairwoman WATERS. Thank you very much. We are very appreciative for the work that you have put into this bill and we look forward to its message.

With that, may I call on Mr. Cleaver?

Mr. CLEAVER. Thank you, Madam Chairwoman. I just have one question.

We had one hearing on this issue, and I think it is something that most of us are going to find easy to support. But I am wondering about a couple of things and have one question.

Number one, would it be of value—and I am thinking now of the National Homeowners Association, Mr. Howard—if communities did a zoning overlay in certain parts of the city where the new building codes would, in fact, require the green construction for new and substantially rehabbed properties, understanding that there would be some initial expense at the beginning on the front end, but that the homeowners are obviously going to experience a reduction in their utility costs and so forth?

That is not a part of the legislation, but I am wondering, does that inhibit the efforts that Mr. Perlmutter is presenting and does it create problems for homebuilders?

Mr. HOWARD. I guess, Congressman, it would depend really upon how each locale imposed that sort of a zoning and what sort of additional requirements would be adherent to it.

When you talk about adding mandates in certain neighborhoods and not in other neighborhoods, it creates a disparity in the market. So I am not sure that we would look for it to be in some neighborhoods and not others.

Moreover, I guess our primary concern with any of these as mandates is that it would decrease the affordability. So, again, you would have to look at the neighborhood in question, determine what the affordability levels are, how much that would be impeded by additional mandates for energy requirements and look at it from there.

In short, I think what I am saying to you is, it would have to be looked at neighborhood by neighborhood and community by community.

Mr. CLEAVER. Yes, Mr. Wluka?

Mr. WLUKA. Besides being a Realtor, I am also a land planner and one who writes zoning bylaws. And zoning is not the appropriate place for what is a code issue in terms of trying to induce

energy-efficient construction. If we were to have the new stretch codes that are out there now as the benchmark, then everyone would have to abide by it.

One of the problems with the incentives, though, is there is an additional cost to the homeowner because they don't get any credit for the money they are saving on the mortgage side.

Mr. CLEAVER. But the builder does. The existing law there is a rebate for energy-efficient—

Mr. WLUKA. True, under the Energy Star program. I have done some subdivisions where the builder does get a credit for it.

Mr. CLEAVER. So the homebuilder passes along the savings to the homeowner, to the buyer?

Mr. WLUKA. But that is a voluntary program. It is not a mandated program.

Mr. HOWARD. Generally, the homebuilder, sir, would check with the buyer and determine their willingness and their desire to have that.

And again, as Mr. Wluka says, it really impacts the affordability. If the homebuyer can afford it, the homebuilder will put it in, get the credit and pass the savings down to the homebuyer. But again it all starts and ends with the ability of the buyer to afford it.

Therefore, that is why I said you have to look at it neighborhood by neighborhood and city by city.

Mr. WLUKA. And to complete my thought, Congressman, the problems I have been having with lenders on energy-efficient mortgages, they are not willing to really take the savings and give the homebuyer credit for them. Some banks will knock ⅛ of a point off, but that doesn't match the difference in the savings. So sometimes the additional cost can't be passed along.

The credit doesn't cover everything. There is still an additional cost to the builder that he has to pass through to the homeowner. It is not 100 percent credit.

Mr. CLEAVER. I am sure those lenders are not recipients of TARP funds.

Mr. HOWARD. It has as much to do with the appraisers, sir, as it does the lenders. The appraisers are not trained in school in looking at energy-efficient mortgages as a reason to revalue the house, and that is something that I think that Congress and industry has to work together to address.

Mr. CLEAVER. That is a question that I hope we can ultimately address, the issue of appraisers. I mean, if we are talking about launching into this new economy and moving into green housing, appraisers are going to have to take that into account, and I am not sure whether we can do it legislatively or whether it is something that would be done on a State level. But I do think that something has to be done, or having those kinds of costs will go for naught.

Mr. Bernstein?

Mr. BERNSTEIN. Yes. There are thousands of overlay districts that have been created in the country for a variety of purposes using mechanisms such as business improvement districts or special service districts or TIFs, and they have a rich history. This how the original street car systems of the United States were built,

through special service districts and joint service sorts of arrangements.

In Chicago, more recently, I think we have found that the creation in our new zoning code of overlay districts for what are called transportation zones ended up stimulating investment in green housing. Interestingly, that wasn't necessarily expected.

So I think that you ought to keep an open mind about experimentation here. You actually are going to do what these gentlemen are suggesting, unleash market forces if we pass this law. And there should be enough in here to learn from. We should try it in different ways in different places.

Chairwoman WATERS. Mr. Clay.

Mr. CLAY. Thank you so much, Madam Chairwoman.

And thank you all for being here with your expertise. You know, I represent St. Louis, Missouri. We have an abundance of brick houses, some close to 100 years old.

Let me ask you, is it more cost effective to greenbuild, to build new housing or to rehab? And on a scale of a city like St. Louis, how effective would it be to actually rehab those old brick structures?

Anybody. Mr. Gatlin, maybe you can help me?

Mr. GATLIN. Sure. I will be happy to start off.

I think in many cases there may be a greater return on investment from renovating existing housing. However, I think that it is important to have benchmarks for new construction because there is still such a wide range of energy and environmental performance.

And, one, to address the issue of valuation, just to bring that into this whole discussion, I do think it is important for the committee to know that the available research often shows that there is not nearly as strong a connection between efficient technologies and efficient buildings. So you can put in a high-efficiency air-conditioning unit, let's say, and not necessarily get the kind of bill savings that you are looking for without right-sizing the equipment, so that the air conditioner is right-sized to, let's say, the fan and the ventilation system.

The point of that is, there are a lot of variables, which is why we actually strongly believe that some kind of voluntary labeling program that helps the homeowner understand the energy performance in their home is really valuable to the homeowner and to those market transactions.

But back to your question, sir, the number of cost-effective energy-saving opportunities in existing homes is enormous. And they can be identified through simple measures like blower-door testing and infrared scans, where in many cases the number one energy-saving opportunity is more insulation, air sealing and duct sealing; and those things can be done for pennies per square foot, and in many cases, by themselves, can yield a 30 percent reduction in home energy costs.

Mr. CLAY. Ms. Koo, did you have something to add?

Ms. KOO. Yes.

We have tested all housing types—amount of affordable housing, all housing types in all regions and all climates, and proven that it is possible to achieve energy efficiency and green through reha-

bilitation; and have established a standard to guide homeowners. So we would be very happy to provide for your constituents that knowledge base.

And at the end of the day, it is green to preserve existing buildings, so that you don't destroy that energy, draw all of it to a dump site just to rebuild anew. So I think the intent is to do massive retrofitting and rehabilitation.

Mr. CLAY. Do we have any examples of public housing units that we can point to that are greenbuilt, and how is that working if we do?

Mr. GATLIN. Well, one-third of the LEED-certified projects currently are low-income housing where the median income of the family is below $50,000. And what we are finding across-the-board is a 28 to 33 percent reduction in energy costs. And in many cases, green housing and greenbuilding generally can be built for either zero premium or very limited premium, again depending on looking at not just the cutting-edge technologies, but also good, integrated design and marrying up the equipment choices with the overall building as a system.

So 30 percent energy reduction across-the-board is what you are seeing for LEED-certified houses, and that would include the low-income.

Mr. CLAY. Okay. And a final question for Mr. Bernstein.

Do you advocate that we can continue stretching the outer reaches of the urban core to suburbia and exurbia all under the auspices of greenbuild? I mean, is that what I heard you say in your testimony? As long as the housing is affordable and is greenbuilt, we can continue stretching the outer limits of our urban core?

Mr. BERNSTEIN. No. What I think I was saying is—and I think it says it in here—if we are going to be granting incentives in here, we should avoid the phenomenon of driving to green housing. It might look green if it is 30 miles out, but if it costs you 3 times as much to get there, I will tell you it is not a good deal no matter where it is. And that is why we support the improved language under the CRA credit provision that speaks to location efficiency, not just energy efficiency.

If you only gave credit for energy-efficient mortgages and didn't consider location efficiency, you would run the risk of incenting more sprawl in the name of being green, and I don't think any of us here would support that. And I think, by contrast, if you have suburban areas that are location efficient—they have the density, the accessibility, there are places to shop nearby and you can plausibly keep improving them; and we have plenty of it, we have mapped it for every region—then that should be where we are targeting these kinds of activities, because you will get to do a lot more of it for the same money available, and we will all meet the multiple goals of this Act and the other things that we are trying to do.

So that is what we are proposing here, and that is why we think the bill is much stronger for having strengthened those location efficiency requirements. In effect, this bill defines location efficiency as part of energy efficiency and the earlier drafts did not. And it is a better bill now for it.

Mr. CLAY. Thank you for that.

Madam Chairwoman, I see that the bell has sounded for votes, and my time has expired. Thank you.

Chairwoman WATERS. That is correct.

Let me thank all of our witnesses who have been so patient today. You have sat through the fact that we had to vote.

It sounds as if, from the testimony that you have given us today, you all have high hopes for this legislation, is that correct, and that you will certainly submit to the author and to the Chair any advice or recommendations that you may have for strengthening the legislation and making it possible to gain the support.

We have some statements we are submitting for the record on behalf of the National Market Housing Council, the National Apartment Association, any others? Without objection, they will be submitted for the record.

I would like to thank you all for your participation today, and this committee is adjourned.

[Whereupon, at 4:39 p.m., the hearing was adjourned.]

A P P E N D I X

June 11, 2009

Testimony of Scott Bernstein, President,

Center for Neighborhood Technology

To the House of Representatives, Committee on Financial Services,

Subcommittee on Housing and Community Opportunity

June 11, 2009

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Center for Neighborhood Technology • 2125 W. North Ave., Chicago, IL 60647 • p: (773) 278-4800 • www.cnt.org

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Chairman Waters, Congressman Perlmutter and Committee Members—

I am Scott Bernstein, President of the Center for Neighborhood Technology in Chicago, chairman of the Surface Transportation Policy Partnership, and Secretary of the Institute for Location Efficiency. I've served on several relevant federal and Congressional advisory panels, and I thank you for the opportunity to testify today on the proposed bill HR2336. My full qualifications are in the Appendix to this testimony.

Basic Response to Your Key Questions

- Do making energy efficient improvements to homes have negative impacts on low-income communities?
- What are the benefits to low-income communities if Congress passes the GREEN Act and HUD moves forward with programs to create more sustainable communities?
- How will underwriting energy efficient and location efficient mortgages change America's urban landscape?
- What affect does "Green" development have on low and moderate Income households and communities?
- What affect will "green" development and "green" initiatives have on communities of color?

Our basic finding is that cost-effective energy efficiency and strategies for supporting and enhancing location efficiency by maintaining and enhancing transportation choice, lower the cost of living and therefore can reduce financial risk and increase wealth for low and moderate income households and people of color through significant reduction of well-documented income disparities. The cost of living benefit is in the range of 10 to 20 percent, or roughly one-half of the measured income disparity between minorities and non-minority households. This is sufficiently significant that energy efficiency and location efficiency should be seen as essential household economic security tools. This also implies that reinvestment oriented smart growth isn't a cost, it's an investment that will pay permanent returns, both environmentally and financially. This finding is detailed on pages 18-20.

In summary, we support this bill with the following suggestions—

1. Define energy efficiency to include location efficiency, a measure that takes transportation efficiency into account.
2. Define location efficient mortgages to take location efficiency value into account as a place-based benefit that helps offset the otherwise-fixed costs of housing
3. Provide parity in treatment, both analytical and in providing federally defined financial services incentives, between Energy Efficient Mortgages and Location Efficient Mortgages, in a manner that does not inadvertently support sprawl or raise the cost of living for borrowers
4. Improve the method of identifying Geographically Underserved Markets by Government Sponsored Enterprises so that the calculations are performed at both the Census Tract and Census Block Group levels of analysis
5. Require that both EEMs and LEMs become universally available features of any federally-approved automated underwriting systems

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

6. Develop implementation timetables and associated rulemaking with annual accountable reporting to the designated regulatory agencies and to the House Financial Services and Senate Banking and Urban Affairs Committees
7. Identify opportunities to take location efficiency into account when awarding federally enabled housing subsidy or credit enhancement, in such programs as the State Qualifying Assistance Plans for Low Income Housing Tax Credits and Section 8 housing assistance vouchers, and in any future project-based assistance provided through HUD; and implement these opportunities
8. Support research that easily discloses the impact that sprawl and decentralization have had on creating the so-called Drive 'til you Qualify housing market and the associated burdens this impact creates across all incomes
9. Require that Consolidated Plans include an analysis of transportation cost burdens and methods of alleviating these burdens, and that they be prepared in coordination with each metropolitan region's Long Range Transportation Improvement Programs and annual Transportation Improvement Programs
10. Strengthen and continue the joint planning and research efforts started in 2008 between HUD and DOT as required in the FY2008 appropriation to better disclose the value of transit oriented development and good transportation choices to helping reduce the cost of living, and use this mechanism to help set cost of living reduction goals for the sum of housing and transportation expenditures.
11. Use EEMs and LEMs and in general, strategies to reduce exposure to the costs of energy and transportation as an essential part of a high-priority approach to prevent future mortgage delinquencies, defaults and/or foreclosures, and to promote household economic success.
12. Provide robust support for incorporating the knowledge of the value of both energy efficiency and location efficiency through federally supported counseling standards and programs, as suggested in Section 9's proposed education campaign.

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Energy Use in American Households is both Home Energy and Transportation Energy in Equal Measure—Which Affects Credit Quality and Ability to Pay

At this moment in time, a tremendous bandwagon of interest, attention, capital and policy has been assembled around the notion of "green buildings." In a sense, the green buildings movement is oriented around a single question of "what to build." Standards for green buildings, such as USEPA's Energy Star, the US Green Building Council's LEED ratings, the American Institute of Architect's Architecture 2030 standards, and the imminent revision of the American Society of Heating, Refrigeration and Air Conditioning Engineer's 90.1 Standard proliferate, along with an equally bewildering set of targets for baseline energy consumption and carbon emissions. As of this writing, almost 1000 mayors have signed the Mayor's Climate Protection agreement, and a review of the city-by-city commitments reveals an overwhelming concern with the energy efficiency of buildings; in a few cases, particularly where the local energy utility is municipally-owned, there's a major focus on green power; all cities are committed to "lead by example" by greening their own buildings and fleets; and only in a handful are there significant commitments to reducing transportation emissions area-wide.

The Residential Energy Consumption Survey conducted by USDOE finds a typical household uses roughly 100 Million BTUs (British Thermal Units) of energy for cooking, space conditioning, lighting and equipment, per year.

The Energy Information Administration of USDOE estimates in 2001 the average American household drove 21400 vehicle miles per year.

The Federal Highway Administration's annual estimate of travel in 2006 for urbanized areas was 23.2 vehicle-miles traveled (vmt) per capita per day, x 365 days per year x 2.6 persons per hh, yields---22,017 vehicle miles per year, a close correspondence.

In 2005, EIA stated that—

"For consumers, energy costs are a foremost concern. Transportation costs have increased due to many factors related to travel and prices paid for transportation fuel, while being somewhat offset by improved fuel economy. In 2001, consumers paid nearly equal amounts for energy used for household services (ranging from cooking and water heating to refrigeration and lighting) and for personal transport. The average household spent $1,520 on fuel purchases for transport and remitted $1,493 for household services, just $27 more per year, as measured in nominal dollars.

By contrast, an average household paid $1,174 for passenger travel in 1994, while having paid $1,620 for household services in 1993 - a year in which heating and cooling seasons were well within 30-year norms. It can be argued that, based on those statistics, what America drives on its roadways has become as important energy-wise as what heating equipment it places in its basements and appliances in its electrical sockets."

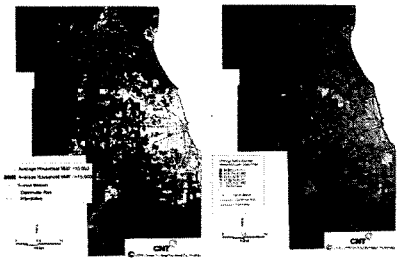
At a vehicle efficiency of 25 MPG, the typical household will use as much energy for transportation as for home energy purposes if they travel 17,600 miles per year, and at 20

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

MPG, the numbers are equivalent (home energy use vs per-household transportation energy use) at roughly 15,000 miles per year respectively.

Without quibbling, I suggest that the numbers are for practical purposes identical—Americans use as much or more energy for transportation as for home energy purposes.

Consider the following two maps. On the left, the map depicts areas where households drive less than 15,000 miles per year in greater Chicago in light green. On the right, we've coded areas where households spend less than $1900 per year for gasoline in yellow or orange; in the red areas, households are spending between $4,000 and $6,000 annually



The bill should adopt a definition of energy efficiency that includes location efficiency.
For the purposes of defining efficiency in the use of transportation energy, a benchmark should be established of total energy use and energy use in units of energy per passenger mile.

We Know How to Measure Transportation Efficiency—and It's a Function More of Metropolitan Quality and Choice than of Income and Household Size

Unlike the consideration of energy used in buildings and by equipment, there has been no generally accepted measure of urban efficiency, such as that which "energy utilization per unit of activity" or "energy efficiency" provides for these other uses. Current energy and climate policy treats urban efficiency as of peripheral interest, and mistakenly equates it with the thermodynamic efficiency of transportation power sources. Unfortunately, engines come with automobiles, and even at today's relatively high fuel prices, the cost of gasoline averages just 20 to 30 percent of the full direct cost of household transportation.

Much as is the case for the reduction of criteria air pollutants, the reduction of energy use and of carbon emissions from transportation rests on the construction of a three-legged stool: cleaner or more fuel-efficient vehicles, cleaner or lower carbon-intense fuels, and reductions in extent of travel or vehicle-miles-traveled.

Getting at this third component has been a challenge. Many factors determine the need to and extent of travel: urban form, extent and quality of amenities, location of employment,

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

availability of public forms of transportation and their frequency and hours of operation, and the income and size of households all influence the measured extent of travel.

Several of us started a conversation about this in the mid-1970s, and various attempts were made to measure or model VMT per household as a predictable function of these factors. With the advent of geographic information systems in the early 1990s, it finally became possible to do this reliably at a relatively fine grained resolution, but it took from 1994 to 2000 to do so with sufficient rigor to satisfy almost 100 peer reviewers, and the results were not published for an additional two years (Transportation Planning and Technology 2002). That study acquired six million households worth of measured VMT and automobile ownership data and using statistical methods, developed a formula that correctly predicted VMT per household per year from 80 to 93.5 percent of the time, as a function of neighborhood characteristics, controlling for income and household size, validated at the Census tract level of geography. Subsequent work showed that these models could be constructed using Census data at the block level of geography, and this was validated first for the Twin Cities, then for a sample of 28 metropolitan areas, and this year upgraded to 52 metropolitan regions across the US with half of the total national population (Brookings 2006, Center for Housing Policy 2006, Center for Neighborhood Technology and Brookings 2008).

This knowledge helped us model the relative value of a "all three legs" strategy for the Presidential Climate Action Plan earlier this year. The results are that a 1.15 percent annual decrease in VMT and a 4 percent annual improvement in passenger fleet efficiency numerically produce the same result. New data from the Federal Highway Administration shows that from March 2007 to March 2008, total VMT in the US dropped 4.3 percent.

With the release of the location efficiency data through this web site, https://htaindex.cnt.org there is now a basis on which widespread measurement of location efficiency can be used to assess the travel demand implications of various types of growth. This can be used on the one hand to look at the greenhouse gas results of various patterns of land use and associated transportation, and on the other to understand the cost of living implications of these same patterns. The web site currently includes this data for 55 metropolitan regions that include one-half the U.S. population, and by July will be updated to include all 337 consolidated metropolitan areas with 84 percent of the population, respectively.

So location efficiency is the key to complementing the question "what to build" with the equally important question of "where to build it," and "with what form, at what scale, and with what supportive amenities."

The Mortgage Market Needs Innovation that Protects Consumers

Every minute in America, another 10.2 homes are sold, 622 per hour, 14,950 per day, or 5.5 million per year. 89.5 percent of these are existing homes and 10.5 percent are new homes. In the typical community, it takes between 5 and 7 years for 50 percent of properties to change ownership. Over 67.8 percent of American households own a home, up from 44 percent in 1940 but down from 69 percent in 2005. Owning a home is the most available and likely pathway to wealth accumulation, and the bedrock of the so-called American Dream. Residential property is also the largest component of tangible wealth in the fixed assets

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

accounts of the National Income and Product Accounts, accounting for some $17.5 trillion or 43 percent of total tangible wealth in 2006.

There are 126 million homes in the US stock, and we are adding 1.8 million per year worth $800 Billion, while losing $250 Billion per year to depreciation.

There are 216 million household vehicles in the US stock worth $1.4 Trillion, we're adding 55 million per year, or 100 per minute, worth $774 Billion per year, while losing $323 Billion per year to depreciation.

With these flows of transactions and stocks of capital, it's not hard to see that modest improvements in the energy efficiency of these assets could potentially add up significantly. It's also not hard to see that investments in homes add more to both the national and to personal wealth than do investments in vehicles, but that we're adding to the stock of each in roughly equal amounts.

Definition of a Location Efficient Mortgage®

A location efficient mortgage is a mortgage in which a borrower's ability to pay is determined in part by the inclusion of a "location efficient value" that takes into account the expected annual travel demand per household and the expected automobile ownership of households in immediate vicinity of the proposed purchase. There are three ways in which this can be accomplished. The preferred method is to use this expected value to estimate a fixed location-related benefit that will offset the traditional estimation of fixed costs, usually calculated as the sum of Principal, Interest, Taxes and Insurance, by an estimated amount, such that the ratio

(PITI minus L)/Income

is less than or equal to a benchmark amount.

This is essentially the method used in pilot programs for both Location Efficient Mortgages® (Chicago, Seattle, San Francisco, Los Angeles) and Take the T Home Mortgages (Boston).[1]

The second method is to assign a fixed amount of savings associated with proximity to a stop, either rail or bus, on a scheduled mass transportation route, and then to add this amount to a proposed borrower's income. The principle a borrower would be eligible for would then be modified according to the formula

PITI/(Income +L)

is less than or equal to a benchmark amount. This is the formula used for the Smart Commute mortgage demonstrations that were conducted in 30 locations.

We recommend the former method, for the following reasons—

[1] In the Take the T Home Mortgage, the sponsoring agency, Mass Housing, prefers to assign the benefit in such a manner as to lower the down payment to zero.

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

- The formula for location efficiency valuation takes into account several key variables that can affect travel demand, including a small area's net residential density, frequency and type of transit service and its connectivity, household size, household income, and distance to employment, which is used to predict and then calibrate vehicle ownership and extent of use; and

- This formula is the equivalent of an energy audit for a building

The Smart Commute mortgage formula assumes that the value of a location is identical throughout the US as a function of transit proximity. Our research covering 52 metropolitan regions with all of the rail mass transit systems and half the population of the US and covering hundreds of thousands of census block groups, shows this to be an inaccurate assumption.

The credit stretches enabled by both kinds of mortgages are apparently a safe bet—with virtually no defaults, the portfolios of borrowers outperformed the market.

However, the largest stretch enabled by a Smart Commute mortgage was $17,000 and the typical stretch was closer to $12,000, and therefore, it is not likely that the use of this product resulted in new homeownership that would not otherwise have occurred. The credit stretch enabled by the LEM and the Take the T Home Mortgage was around $50,000, and therefore, the increased ability to amortize the mortgage due to the effect of the more accurate valuation could play a significant role in increasing homeownership and/or in otherwise affecting location decisions.

Fannie Mae's stated reason for introducing the Smart Commute Mortgage was ease of calculation; however, the Location Efficient Value was made available in a one-click lookup table and was therefore no more difficult than the calculation required for a SCM. At the time of the experiment, LEVs had only been studied for four regions; they are now available for 52 regions at http://htaindex.cnt.org, and the incremental cost per region to validate transportation expenditures is trivial—for example, data for the metropolitan areas of Tuscon Arizona and San Antonio Texas was added at a cost of $5,000 per region, and the cost of going from 55 regions to all 337 will be completed in July for a total of $200,000, made possible with the generous support of the Rockefeller Foundation.

We recommend that our language for defining location efficiency and location efficient mortgage be adopted in HR2336.

Test Flight for LEMs 2000-2005

Location Efficient Mortgages® are conventional mortgages in which the location efficient value of an area is counted within the "qualifying ratio" of presumably fixed housing costs to income in underwriting a prospective borrower's application.

Three organizations, the Center for Neighborhood Technology, the National Resources Defense Council and the Surface Transportation Policy Project, formed the Location

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Efficient Mortgage Partnership[2] to promote the use of this product, and approached the Federal National Mortgage Association for project sponsorship in 1994. The Partnership was told that an "underwriting experiment" could be conducted in which a limited number of mortgages could be issued out of each of the company's fifty or so Partnership Offices. In a seminal meeting with the company's Executive Vice-President for Credit Policy, it was stated that (1) the theory on which alternative underwriting was proposed seemed to be valid, (2) a design would need to be identified to help get the product to scale, and (3) as leaders in the movements to promote transportation reform and smart growth, the company valued our insights on the likelihood that supportive federal policy including the Clean Air Act Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 were likely to continue in force for the foreseeable future, which was referred to as a kind of "societal credit enhancement."

Encouraged by this meeting, the members of the Institute raised funds from foundations and the federal government, both to perfect the analysis and generation of geo-coded data bases of "location efficient values," to promote further policy development and to help design an underwriting experiment that could eventually be taken to scale.[3] The Partnership identified a unique set of data that could be used both to prove the theory's validity and to acceptably reduce underwriting risk. That data is the odometer readings taken in "smog check" readings at state-sponsored test stations, and the acquisition of 1 million household records in Chicago, 2 million from San Francisco and 3 Million from Los Angeles, along with the statistical method for data verification and interpretation was a major breakthrough in the state of travel demand analysis.

The Partners used their access to a variety of agencies to promote supportive and tandem policies. Location efficient mortgages became a feature of state and regional air quality plans, affordable housing strategies, the White House sponsored National Homeownership Partnership Strategy, the White House Policy Dialogue on Reducing Greenhouse Gas Emissions from Personal Motor Vehicles, and the reports of the President's Council on Sustainable Development, among other placements. In Chicago, Los Angeles, and San Francisco, advisory committees of lenders, local governments, developers, employers and affordable housing advocates developed proposals for underwriting experiments. At Fannie Mae's request, a fourth city, Seattle was added to the pilot program.[4]

Sufficient analysis and program design was completed to proceed with program approval by Fannie Mae in 1999. A term sheet was issued for the program, and an initial allocation of up to $100 Million for purchase of location efficient mortgages was made. There were many false starts—reorganization and staff turnover at Fannie Mae, tension between the traditional commodity business of providing liquidity to the national market through large mega-regional purchase offices and the newer network of partnership offices set up to promote

[2] Now doing business as the Institute for Location Efficiency

[3] Initial funding was provided by the MacArthur Foundation, which was followed by grants from the Surdna Foundation, and allocations by the sponsoring organizations of support provided by the Joyce Foundation, Energy Foundation and the Nathan Cummings Foundation. Federal support was provided by a cooperative agreement with the USEPA Offices of Urban Economic Development and Transportation & Air Quality, the Federal Transit Administration, and the United States Department of Energy, Contract IL 26-6001-01

[4] Support for the additional analytic work in Seattle was provided by grants from the Bullitt Foundation, and from the City of Seattle, Office of the Mayor

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

innovation were two common problems. There were communications problems between the recently established partnership offices and headquarters—lenders who were solicited for the program by the local partnership offices later were found unacceptable to headquarters staff.

There were also two large structural problems with the *ad hoc* nature of the overall relationship. The LEM Partnership was not a lender, and therefore couldn't be a "Fannie Mae customer." There was also a serious problem with identifying an acceptable path to getting to scale. Fannie Mae fit the description at the beginning of this paper of an institution committed to using statistical profiling through credit scoring to establish new ways to take risk, and their underwriting team's framework did not include analysis of household transportation expenditures. That team also claimed that there was no way to migrate our software for location efficiency valuation to their system—when we pointed out that in at least one instance, that kind of modification had been made for pilot Energy Efficient Mortgage underwriting, they softened their stance somewhat.

The project was finally approved for launch in May of 2000, starting in Chicago. The first borrowers were offered Energy Star refrigerators by the City of Chicago Department of Planning. Efforts were made to finance the purchase of a deeply discounted transit pass from the Chicago Transit Authority, whose board kept deferring a vote on the matter. The Chicago Tribune examined the product, and ran an editorial with the headline, "Skip the Car, Buy a House." (The only sour note in the piece was a complaint about the mandatory requirement for homeowner counseling). After the first year of the program, it appeared that 30 percent of the borrowers had sold one or more automobiles. VMT reduction was examined and pronounced significant. In San Francisco and Los Angeles, Fannie insisted that the lead be taken by Countrywide Mortgage, and the people assigned from that company were not nearly as enthusiastic as their CEO, despite a bona fide offer from State Treasurer Phil Angelides to incorporate LEMs into the State of California's structured conduit financing.

For obscure reasons, staff at headquarters was not interested in taking the experiment to the next level. There was a complaint that the modeling was too complex, even though there were no complaints from users of the simple web site set up to generate the location efficient values. When long-time CEO Jim Johnson was succeeded by Franklin Raines, Raines expressed interest in a position that the company could take in the emerging market for greenhouse gas emissions reduction, and hired the firm of Cantor Fitzgerald to help perfect the company's opportunities.[5] Surprisingly, the company announced they were rolling out a new experiment, to be known as the Smart Commute Mortgage. The basis for valuation for this one would be simply location within a ½ mile or sometimes a ¾ mile radius transit zone, for which an amount of between $200 and $250 per month could be assigned as a form of income in a qualifying ratio. Smart Commute "roll-outs" occurred across the country, typically an announcement involving a chief elected officer such as a mayor, an initial borrower, and one or more members of Congress. Anecdotally, mortgage volume was modest, perhaps 30-50 mortgages at each of 40 locations. Again anecdotally, there were few or no defaults; in this case, not surprising, since the terms of the Smart Commute mortgage represented a more conservative lending policy—counting the valuation as income put that number in the denominator, where it was worth 28 percent as much as if had been put in the numerator as an offset to the sum of Principal, Interest, Taxes and Insurance.

[5] Fannie Mae was subsequently awarded a patent for their greenhouse gas measurement and verification protocol.

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

On average, it's estimated that the credit stretch of the Smart Commute project was in the range of $10,000 to $17,000 per mortgage, as compared to a range of $20,000 to $50,000 for LEMs. With the former range, it's not likely that the extra credit stretch actually produced an increase in homeownership; this could also be said of the Energy Efficient Mortgage, where the typical additional credit amounted to $8,000 per loan or less. There was one more additional LEM type program initiated, the Take the T Home Mortgage, sponsored by the Massachusetts Housing Finance Agency and the MBTA. What they offered was an LEM with a mandate to provide evidence of regular transit ridership, which the MBTA facilitated by approving the kind of linked and discounted pass that the Chicago authority had not seen fit to accept. The chart below compares the characteristics of Conventional, Energy Efficient, Smart Commute, Location Efficient and Take the T Home Mortgages.

Characteristic	**Conventional**	**Energy Efficient Mortgage**	**Smart Commute Mortgage**	**Location Efficient Mortgage**	**Take the T Home Mortgage**
Debt Coverage	**Qualifying Ratio= PITI/Inc**	**(PITI-E)/Inc**	**PITI/(Inc+T)**	**(PITI-L)/Inc**	**PITI/Inc**
Down Payment	3 to 20 Percent	3 to 20 Percent	3 to 20 Percent	3 to 20 Percent	0
Basis for Energy Benefit	None	Home Energy Rating System Score	None	None	None
Basis for Location Benefit	None	None	Distance to transit	Location Efficient Value, function of neighborhood and transport choice	Monthly Transit Pass used as a proxy for LEV
Borrower Value-Added	None	$6-$10,000	$8-15,000	$12-$50,000	$20-$50,000

(Note: PITI is Principal, Interest, Taxes & Insurance, Inc is Income, T is Household Transportation Expenditures, L is Location Efficient Value, LEV is also Location Efficient Value).

How well did these loans perform? From 2001 to 2004, in

- Seattle, 24 LEMs, zero delinquencies or defaults, no foreclosures
- Chicago, 41 LEMs, zero delinquencies or defaults, no foreclosures
- Boston, 53 Take the T Home Mortgages, 1 default, no foreclosures
- San Antonio, 100 Smart Commute Mortgages, no defaults, no foreclosures

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Some Lessons from the LEM Experience

There were some obvious complexities in establishing this program A mortgage product that could potentially provide multiple benefits—such as increased homeownership opportunities, bridging the affordable housing gap, reducing travel, reducing emissions, and playing a role in reversing sprawl—couldn't be counted on to do any of them in depth. The project sponsors were not lending institutions and had little standing in the secondary market. At the end of the day, the good will expended in securing federal support for this program including from the offices of the President and Vice-President counted insufficiently to get the company to take the program to scale.

Perhaps also this wasn't a true experiment. Besides the lack of a transparent mechanism that to this day prevents us from fully evaluating the results, it was designed to enable fast growth through a top-down decision by the leading secondary market lender. Other methods could have been used, including:

- Simultaneous offerings by other GSE's, including Freddie Mac, the 12 Federal Home Loan Banks, and Ginnie Mae/FHA;
- Joint marketing with efforts to promote employer-assisted housing;
- Product re-design as an energy and location efficient mortgage;
- The development of an independent secondary market lender as a conduit;
- The establishment of a method of tagging conventional loans made in locations with high Location Efficient Values to more quickly create deal flow at scale; and
- The creation of enforceable targets either by Congress (which could occur in the annual reviews of GSE responsibilities to "geographically underserved markets") or by one or more of the bank regulators,

among other ideas.

Our Official Definition of Housing Affordability is Antiquated and is Part of the Problem

Historically, both housing affordability and mortgage debt service coverage derive from an old adage, "a week's work for a month's rent." While this ratio has crept up from one dollar out of five to 30 percent or more today, the principle remains the same—a standard ratio is used, such as the ratio of the sum of contract rent plus utilities to income—to determine affordability officially.

These ratios are used typically to

- Describe a typical household's housing expense
- Analyze trends & compare different HH types
- Administer rules defining who can have subsidies
- Define housing needs for public policy purposes
- Predict the ability of a HH to pay rent or mortgage, and/or
- Select HHs for a rental unit or mortgage

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

The problem with the standard definition is that it ignores the very physical need to travel, and with the increasing expense of travel, it signals an incomplete (or asymmetric) picture to sellers and buyers of housing services.

Financial services provide access to information that can be used by borrowers, lenders and investors to decrease risk and/or increase opportunity

The range of such services is from everyday financial counseling services and home economics courses to consumer credit, secured mortgage lending, and more complex secondary or wholesale market transactions designed to increase overall liquidity in the retail lending marketplace.

The self-amortizing mortgage as we know it today was introduced by the Morris Savings Banks in the 1910s, replacing cash and contract sales; prior to that time, the top uses for consumer credit were for furniture and musical instruments. The automobile industry financed studies at Columbia University to develop an analogue and by 1920 the top two uses of consumer credit were home purchases and financing automobiles.

As a result, the percentage of consumer expenditures for various items changed starkly. In 1920, 41 percent went for food, 27 percent for housing, and 3-5 percent for transportation; by 2006, those percentages had flipped—food was down to16 percent, transportation outlays had risen on average to 15-35 percent, while housing remained relatively constant 25-35 percent, respectively.

A variety of mechanisms were created during the Depression to help finance home purchases. But public policy was aimed at expanding metropolitan regions, and both publicly financed infrastructure investments, such as for transportation, electricity, water and sewer, and private investing in energy infrastructure and telecommunications, and importantly, for access to credit, were increasingly aimed outward to the suburbs at the expense of older and more urban areas, a process known as redlining. Vibrant community-based and national movements succeeded in new laws being passed to both disclose the origins and geographic destinations of the funds banks depended on to anchor home mortgage lending, and to determine accountability and performance for affirmatively meeting the credit needs of their primary service territories. It seemed like the stage might be set for both halting sprawl and greenlining our existing communities.

Several factors prevented this from occurring optimally.

First, <u>home mortgages had become commoditized within narrow product definitions.</u>

Funds for home mortgage lending increasingly came from mortgage-backed securities issued by Government Sponsored Enterprises, including Fannie Mae and Freddie Mac, which purchase from the general market, Ginnie Mae, which purchases from the Federal Housing Administration, itself a federal enterprise that insures riskier mortgages, and the 12 Federal Home Loan Banks, regional credit cooperatives that emerged from the original Federal Home Loan Bank Board after the FIRREA legislation helped restructuring the failed savings and loan industry. These enterprises set the rules by which loans are available, and they are accountable for meeting safety and soundness criteria, a set of risk-performance measures. These criteria do not take into account the extent to which operating costs for buildings such

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

as energy and water services, and operating costs for families such as transportation expenditures, appear to vary by location and availability of travel choices. The failure to take these into account prompted one popular writer to quip that the regular reporting of new home starts is probably a better indicator of sprawl then of financial well-being (James Kunstler, The Geography of Nowhere, Free Press 1994).

Second, building at urban scale seems harder and more expensive than at suburban scale.

The cost of assembling land is among the top concerns of investors representing $717 Billion in commercial equity and $4 Trillion in annual debt. Land plus infrastructure represents roughly 40-50 percent of the cost of development. The capacity to develop efficient communities at scale is limited, but even more so are the opportunities to do this in places where it will do the most good. These same developers and investors express a consistent preference for mixed use, infill transit-oriented development, and a modest emerging interest in a "green building" product, but so far the portion of their available resources so devoted has risen from 3 percent to just 5 percent in the last 10 years (PricewaterhouseCoopers and ULI, annual, 1999 to 2008. Driven by an aging population organized in smaller households, America's 3300 existing and 700 developing transit-oriented station areas could accommodate 25 percent of the increased demand for housing by 2030 (CNT and CTOD 2006).

Third, trends in public policy and in mortgage lending and purchasing have favored information-rich approaches to underwriting risk. Traditional screening formulas such as loan-to-value ratios and qualifying ratios (which measured the expenditure of allegedly fixed expenses for principle, interest taxes and insurance, to income) were supplemented and in some cases supplanted by automated credit scoring. To hedge the additional risk in lending to lower and moderate income borrowers, credit scoring was often paired with home owner counseling and financial literacy courses. Again, the analyses underlying these new tools failed to capture the cost of utility services or of transportation, and as these costs grew, the rate of delinquencies, defaults and occasionally foreclosures grew in tandem (Mortgage Bankers Association of America, 2006).

Fourth, methods of financing and policies to promote transportation and land use networks that provide optimal choice for households were largely lacking.

The Defense Highway Act of 1944 became the basis for the Interstate Act of 1956, and was totally oriented toward high capacity highway networks. No such mechanism was created for urban or metropolitan mass transportation (Bernstein et. al., Brookings 2003). The ISTEA legislation of 1991 did provide enabling flexibility for states and metropolitan planning organizations to use highway funds for this purpose, but few took the bait. The Urban Mass Transit Act, later the Federal Transit Act, is oriented around providing modest funding for a handful of cities per year, but on a project oriented, not a planned outcome basis. None of the enabling energy policy acts of the 1970s or the more recent acts in 1992 or 2007 gave the US Dept. of Energy a mission to support urban, community, metropolitan or place-based energy strategies, let alone place-based transportation choices. Both state and local governments and private markets are dependent on the federal statistical system to track household income and expenditures, but there is not a single person we can identify in that system devoted to full-time reconnaissance of transportation and energy expenditures on a small area basis, and

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

even the tracking of housing expenses within metropolitan areas is on too broad of a basis to be useful in helping consumers identify affordable choices.

Lack of Attention to the Information Challenge Supports Bad Decisions

Some of this is the fault of traditional approaches—housing affordability for over a century has been defined as "a week's pay for a month's rent."

But what happens when the "rent" includes a previously ignored component that is rising in price faster than the home or apartment itself?

The economics profession calls this situation, where essential consumer information is excluded, and sellers know more than buyers, an information asymmetry. The formalization of this insight led to the Nobel Prize in economics being awarded to Joe Stiglitz, Frank Spence and George Akerlof in 2001.

It seems that the entire process of signaling the cost of residing in a location meets this description. Housing affordability indexes do not include these expenditures, the popular web sites Realtor.com and Zillow.com do not address them, and no current publicly available source of information on these expenditures is available in close to real time.

One significant result of this process has been the support of a real estate market that over produce housing opportunities in distant locations, known as the "drive 'til you qualify" market.

A study for the Center for Housing Policy documented that the effect of such a market was to drive the cost of transportation for working households who "drive 'til they qualify" as high as or higher than the cost of shelter (Center for Housing Policy 2006).

This study was based on an exhaustive review of the science of location efficiency, which involved determining the extent to which neighborhood characteristics and household characteristics each determine the demand for transportation. Traditionally, it has been assumed by planners and scientists that the latter dominated, e.g., that income and household size explained the variation. The location efficiency baseline study showed that the opposite was true, based on a study of 1 million household driving records in Chicago, 2 million in San Francisco and 3 million in Los Angeles (2002). An algorithm was developed that reliably predicted household automobile ownership and extent of driving, measured as vehicle-miles-traveled, between 80 and 92 percent of the time. With the support of the Brookings Urban Markets Initiative, methods of using generally available data were developed and applied to 52 metropolitan regions, and a new Housing+Transportation Affordability Index web site released in April 2008 puts this data and the ability to map it into the public domain.

Based on the data we've generated for these regions, it appears that for working families earning $20-$35,000 per year, the sum of Housing + Transportation Costs amounts to two-thirds of income, and for those earning $35,000 to $50,000, to three-fifths of income, respectively.

How This Affects Our Perception of Housing Affordability

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

The large programs available for subsidizing the costs of housing, such as Low Income Housing Tax Credits and Section 8 rental assistance vouchers, utilize the official definition of "housing affordability" as housing that costs a renter or borrower 30 percent of income or less. In a marketplace where the lowest price land results in the highest priced transportation, officially affordable housing is sited in unaffordable places, and vouchers are used to acquire "affordable" housing at unaffordable prices subsidized with federal appropriations.

For the 52 regions in our sample, we measured household VMT per year at the Census block group level. There are 109,950 block groups in these 52 regions, comprising 57.6 million households or one-half of the U.S total.

For the purposes of illustration, let's assume that the median US household income is $50,000.
In our 52 region sample, 59 percent of the households in total earned less than $40,000.

The portion of these regions where households drove more than 15,000 miles per year amounts to 84 percent of the total land available, and in this portion of these regions, the population was 28 million households, of which 7.9 million, or 28.5 percent, earned less than $40,000 annually.

The portion of these regions where households drive more than 17,600 miles per year, amounts to 76 percent of the total land available, and in this portion of these regions, the population was 17.3 million households, of which 4.3 million or 25.1 percent, earned less than $40,000 annually.

The current method of assessing the degree to which mortgage purchases by GSE's addresses geographically underserved markets is to look at lending activity by GSE's to households earning 80 and 90 percent of area median income at the Census tract level.
However, tracts can be quite large—in our 52 region sample, the average tract size in central cities is 565 acres, and in suburbs is 7366 acres. By contrast, in central cities the average block group size is 189 acres and in suburbs is 2350 acres, respectively.
We recommend that the bill include language to require that oversight on geographically underserved markets be analyzed at both the tract and the block group levels; both kinds of data are published by the Census and therefore the extra cost should be trivial, while the value of improved ability to target underserved markets in an accountable framework is high.

What this New Knowledge Could Mean for Mortgage Lending

Until the development of the web site, there was not reliable basis for assigning likely extent of and cost of travel to small geographic areas.

With this assignment, not only can household travel costs be reliably predicted, but so can greenhouse gas emissions, which are a product of carbon content of fuel, efficiency of energy use, and extent of driving.

When mapped, these two main outcomes of location efficiency show remarkably similar profiles.

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

- The more efficient an area, the lower the cost of transportation to a household, and
- The more efficient an area, the lower the emissions per household.

The Mortgage Innovations in This Bill Have Been Around Since the mid-1970s and Tested—We're In a Crisis and Need to Act Accordingly

To address the questions posed by the Committee regarding impact on communities of color, we examined recent data for the Chicago metropolitan area from the American Community Survey for 2007. We assembled data on the distribution of incomes for White, Hispanic and Black & African-American households and asked the question, how does the distribution of location efficiency benefits affect these households, and how much they be further affected by investments in energy efficiency?

The median income for All households in 2007 was $58,946. This was composed of

- Median income for White households of $67,086,
- Median income for Hispanic and Latino households of $46,460, and
- Median income for Black and African-American households of $35,643, respectively

We then examined a range of actual savings that occurs from location efficiency, which results in lower automobile ownership and fewer miles driven per household per year.

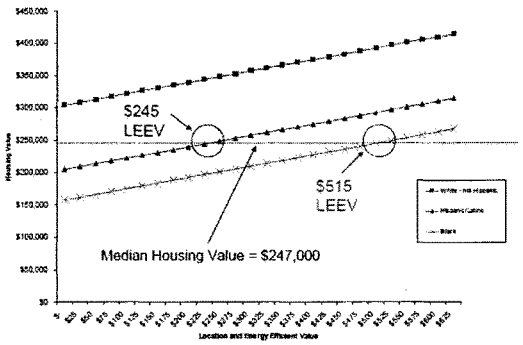
We used a formula to estimate savings developed by the Federal Highway Administration. In 2008, the fixed cost of driving was $5,078 per vehicle, and the variable cost per mile reflects a typical urban vehicle efficiency of 20 miles per gallon of fuel, $4 per gallon and 12,000 miles per vehicle per year. This yields a gross Location Efficient Value of $625 per household per month that is potentially avoidable. To avoid overstating the benefit, our calculation assumes that a family seeking a more location efficient location to reduce their transportation expenditures will also need to increase their use of mass transportation. This could be seen as the need to purchase two monthly passes at $75 per pass; or alternatively, one monthly pass and one membership in a car-sharing organization, such as Chicago's I-Go Car-Sharing, the Bay Area's City Car Share, the Twin Cities Hour Car, Philly Car-Share, or the for-profit Zip-car. In either case, this reduces the gross LEV from $625 per month to $475 per month.

We can also use the same method to address the potential impact from energy efficiency investments through an Energy Efficient Mortgage. Typical energy bills for a single family home in the Chicago metropolitan area are $120 per month for electricity, and $180 per month for natural gas. The cost of reducing this by one-third is about $10,000, or by one-half for $25,000 respectively. It should be noted that the costs for conserving by these amounts in multi-family housing are much less: the Cook County Energy Savers Fund is achieving one-third savings for $3,000, and one-half for $5,000, respectively. In any event, the amount saved represents what might be called an Energy Efficient Value of an additional $100 to $150 per month.

These benefits are non-rival, that is, one can save money on the cost of driving without affecting the costs for natural gas and electricity, and vice-versa.

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

For illustration, we've assembled the rough result in a chart.



This chart shows the following:

Absent any assigned value for location efficiency or energy efficiency,

- Median income White households can afford the median value homes of $247,000;
- Median income Hispanic households can only afford a $200,000 home; and
- Median income Black households can only afford a $150,000 home, respectively.

However, when a value is assigned for Location Efficiency Value, Energy Efficient Value, or both as a combined Location and Energy Efficient Value or LEEV,

- Median income Hispanic households can potentially afford a median value home if their LEEV is $245 per month or greater; and

- Median income Black households can potentially afford a median value home if their LEEV is $515 per month or greater, respectively.

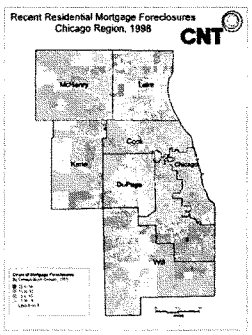
These LEEVs can be achieved as a combination of energy efficiency packages, transportation improvements or both. To achieve the energy efficiency savings will take homeowner investments in the range of $10,000 to $25,000, or at current interest rate of 5.5 percent and a 30 year fixed-rate mortgage, a monthly payment of $57 to $154 per month, or less if these investments can be subsidized through such programs as the Weatherization Assistance Program, utility-based demand side programs, or any of the proposed HUD and DOE programs that are authorized under the American Recovery and Reinvestment Act.

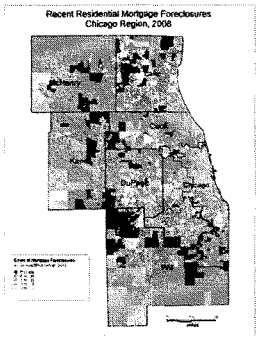
Finally, we also examined trends in where foreclosures have occurred, annually, from 1998 to 2008.

Whereas foreclosures were much more likely to occur in the central city from 1998 to 2005, this clearly started shifting in 2006, and the fastest rate of growth is clearly now firmly in the suburbs, and tends to be centered in the suburbs with the least amount of location efficiency and the highest cost of driving. This mirrors research findings from metropolitan areas in

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

California and Arizona prepared by the Federal Reserve Bank of San Francisco, and my investigative newspaper reports prepared in Atlanta and Houston from public records.





We are not saying that transportation costs by themselves caused the foreclosure crisis—sub-prime lending, and excessive extension of credit by banks to borrowers with too little coverage were the major culprits. But with the primary reason for mortgage application rejection for first-time home buyers was too much use of consumer credit, and the principle use of consumer credit is for vehicle ownership, then it should be no surprise that this excacerbated the financial pressures on families.

It also means that any long-term solutions to the mortgage crisis need to take these extra pressures due to rising household transportation and energy expenditures into account. Since current solutions do not, there is continued risk in the marketplace. One director of a State Neighborhood Stabilization Program told me that their program was spending $150,000 to $200,000 per household to get foreclosed households back into rehabbed homes they had been evicted from, and stated that if gas prices peak again, as they most surely will, there is a risk of having to do it all over again.

To summarize, the immediate benefit of the GREEN Act's energy efficiency and mortgage provisions is to reduce the risk of further financial stress to low and moderate income households and communities of color, which in our example have median incomes in the range of 60 to 80 percent of those of White households, respectively.

In the longer run, the impact will be to lessen these income disparities by lowering the cost of living permanently, in the range of 10 to 20 percent; or to put it another way, by increasing disposable income for these target populations by 10 to 20 percent, tax-free.

Recommendations

The innovations represented by Energy Efficient Mortgages and Location Efficient Mortgages date back to the mid-1970s; the gasoline price crisis and the foreclosure crisis require urgent action. Therefore, in summary, we support this bill with the following suggestions for improvement—

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

1. Define energy efficiency to include location efficiency, a measure that takes transportation efficiency into account.
2. Define location efficient mortgages to take location efficiency value into account as a place-based benefit that helps offset the otherwise-fixed costs of housing
3. Provide parity in treatment, both analytical and in providing federally defined financial services incentives, between Energy Efficient Mortgages and Location Efficient Mortgages—the bill as drafted grants credit toward Community Reinvestment Act performance for EEMs and should do the same for LEMs
4. Improve the method of identifying Geographically Underserved Markets by Government Sponsored Enterprises so that the calculations are performed at both the Census Tract and Census Block Group levels of analysis
5. Require that both EEMs and LEMs become universally available features of any federally-approved automated underwriting systems
6. Develop implementation timetables and associated rulemaking with annual accountable reporting to the designated regulatory agencies and to the House Financial Services and Senate Banking and Urban Affairs Committees
7. Identify opportunities to take location efficiency into account when awarding federally enabled housing subsidy or credit enhancement, in such programs as the State Qualifying Assistance Plans for Low Income Housing Tax Credits and Section 8 housing assistance vouchers, and in any future project-based assistance provided through HUD; and implement these opportunities
8. Support research that easily discloses the impact that sprawl and decentralization have had on creating the so-called Drive 'til you Qualify housing market and the associated burdens this impact creates across all incomes
9. Require that Consolidated Plans include an analysis of transportation cost burdens and methods of alleviating these burdens, and that they be prepared in coordination with each metropolitan region's Long Range Transportation Improvement Programs and annual Transportation Improvement Programs
10. Strengthen and continue the joint planning and research efforts started in 2008 between HUD and DOT as required in the FY2008 appropriation to better disclose the value of transit oriented development and good transportation choices to helping reduce the cost of living, and use this mechanism to help set cost of living reduction goals for the sum of housing and transportation expenditures.
11. Use EEMs and LEMs and in general, strategies to reduce exposure to the costs of energy and transportation as an essential part of a high-priority approach to prevent future mortgage delinquencies, defaults and/or foreclosures, and to promote household economic success.

Our heartfelt thanks to the Committee for the opportunity to testify in support of this important legislation today.

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Bibliography of Resources Cited or Used

Resources and Sources Cited

C. Makarewicz, P. Haas, A. Benedict, S. Bernstein, "Estimating Transportation Costs for Households by Characteristics of the Neighborhood & Household," ***Transportation Research Record,*** 2008

David B. Goldstein, John Holtzclaw, and Todd Litman, Overcoming Barriers to Smart Growth: Surprisingly Large Role of Transportation Planning, Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings, 2006

Hidden in Plain Sight: Capturing the Demand for Housing Near Transit, Reconnecting America, http://www.house.gov/science/hearings/full02/apr17/bernstein.htm

Jen McGraw, Nicole Friedman Catherine Bendowitz, Scott Bernstein, "Transportation and Low Carbon Mobility, Chapter 7 in ***Presidential Climate Action Plan,***" www.climateactionproject.org, 2007

John C. Dernbach and Scott Bernstein, "Pursuing Sustainable Communities: Looking Backwards, Looking Forward." ***Urban Lawyer***. 2003. American Bar Association. Volume 35

John Holtzclaw, Robert Clear, Hank Dittmar, David Goldstein and Peter Haas "Location Efficiency: Neighborhoods and Socioeconomic Characteristics Determine Automobile Use," ***Transportation Planning and Technology***, 2002, Volume 25, 1-27

Jonathan Miller (ed), ***Emerging Trends in Real Estate 2008,*** PricewaterhouseCoopers and ULI, January 2008

Kiyonobu Kaido, "Urban Densities, Quality of Life and Local Facility Accessibility in Principal Japanese Cities," Ch. 16 in ***Future Forms and Design for Sustainable Cities***, Mike Jenks and Nicola Dempsey, Architectural Press/Elsevier, Oxford UK 2005, 311-338

Koen Steemers, "Energy and the City: Density, Buildings and Transport;" ***Energy and Buildings***, Elsevier, 35: 3-14, 203

March 2005, http://www.reconnectingamerica.org/html/TOD/newReport.htm

Mary Jean Burer, David B. Goldstein and John Holtzclaw, "Location Efficiency as the Missing Piece of the Energy Puzzle: How Smart Growth Can Unlock Consumer Cost Savings," ***Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings, 2004***

"MBA Long-term Mortgage Finance Forecast," Mortgage Bankers Association of America, April 10, 2008, at www.mbaa.com

Peter Newman and Jeffrey Kenworthy (2006) "Urban Design to Reduce Automobile Dependence", ***Opolis: An International Journal of Suburban and Metropolitan Studies***: Vol. 2: No. 1, http://repositories.cdlib.org/cssd/opolis/vol2/iss1/art3

Prindle, Bill, Cracking the Efficiency Financing Nut: A Review of 30 Years of Energy Efficient Mortgages, presentation to the Alliance for Climate Protection, Nashville TN May 14, 2008

Richard Gilbert and Anthony Perl, **Transport Revolutions: Moving People and Freight without Oil**, London UK 2008

Scott Bernstein, Bruce Katz, Robert Puentes. ***TEA21 Reauthorization: Getting Transportation Right for Metropolitan America.*** Brookings Institution. 2003. http://www.brook.edu/dybdocroot/es/urban/publications/tea21.pdf

Scott Bernstein, Carrie Makarewicz, Kevin McCarty; ***Driven to Spend***, Center for Neighborhood Technology and Surface Transportation Policy Partnership, 2005, at www.transact.org

Scott Bernstein, David Burwell, Steve Winklemann; ***Climate Matters: the Case for***

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Addressing Greenhouse Gas Reduction in Federal Transportation Policy; Funders Network for Smart Growth & Livable Communities, 2003 at http://www.fundersnetwork.org/info-url_nocat2778/info-url_nocat_show.htm?doc_id=148724

Scott Bernstein, ***Hidden Assets*** (originally published as Using the Hidden Assets of America's Regions to Build Sustainable Communities), 1999, at http://www.cnt.org/hidden-assets/

Scott Bernstein, ***Moving from Split Incentives to Joint Stakes in Energy Technology and Climate Research Initiatives,*** House Committee on Science and Technology. April 17, 2002

Scott Bernstein. ***Planning as If People and Places Matter: Surface Transportation Research Needs and Performance for the Next Century.*** Senate Committee on Environment and Public Works. March 15, 2002

Scott Bernstein, How Location Efficient Carbon Neutral Mortgages Support a Convenient Solution to an Inconvenient Truth, Presentation to Alliance for Climate Protection, Nashville TN May 14 2008

Scott Bernstein; "The New Transit Town: Great Places and Great Nodes That Work for Everyone," concluding chapter, ***The New Transit Town: Best Practices in Transit Oriented Development***, Hank Dittmar and Gloria Ohland (eds). Island Press 2004

Sharon Feigon, Sarah Campbell et. al., ***Combating Global Warming Through Sustainable Transportation Policy,*** Transportation Research Board, Transit Cooperative Research Program. Project H21. Program report (2002) and web site; www.travelmatters.org

Sustainable America: A New Consensus for Prosperity, Opportunity, and a Healthy Environment, President's Council on Sustainable Development, Washington DC, Government Printing Office, 1996

Towards a Sustainable America: Advancing Prosperity, Opportunity, and a Healthy Environment for the 21st Century, President's Council on Sustainable Development, Washington DC, May 1999

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

Scott Bernstein is President of the Center for Neighborhood Technology, an urban sustainability innovations laboratory which develops resources and systems to promote healthy, sustainable communities by helping local leaders understand and use their hidden assets; winner of the 2009 MacArthur Foundation Award for Creative and Effective Institutions, being awarded today, June 11; and publisher (1978-1998) of ***The Neighborhood Works,*** winner of the Peter Lisagor Award for Public Service Journalism. He studied engineering and political science at Northwestern University and served on the research staff at its Center for Urban Affairs. He taught at UCLA, was on the Humphrey School Policy Board at the University of Minnesota and was a founding Board member at the Brookings Institution Urban & Metropolitan Center. CNT has spent the last thirty years analyzing the relationships between regionally scaled economic and political systems, and the status of communities within these regions. Demonstration work in the 1980's in the fields of energy efficiency, pollution prevention, stormwater management, recycling and housing abandonment prevention helped fuel a generation of community development institutions and learning.

Climate Change and Sustainable Development: President Clinton appointed him to the President's Council for Sustainable Development, where he co-chaired its task forces on Metropolitan Sustainable Communities and on Cross-Cutting Climate Issues with Dr. James Baker of the National Oceanographic and Atmospheric Administration; and to other Federal advisory panels on global warming, development strategy, and science policy. His work has provided leading approaches to urban economic development, resource efficiency, and transportation; currently, CNT is analyzing Chicago's carbon footprint for Mayor Daley's Chicago Climate Task Force of which he is a member; partnering with the Clinton Foundation, ICLEI, Microsoft and Ascentium to provide advanced climate change planning software for the world's forty largest cities, and co-founded the Presidential Climate Action Plan, which wrote a "climate change playbook" for the first 100 days of the Administration. This assignment also produced a study demonstrating that reducing travel is as important as, and a necessary complement to cleaner transportation technology.

Transportation Policy: He co-founded the Surface Transportation Policy Partnership in 1990, a national coalition which shifted federal policy toward greater local control, and currently serves as Chairman. The resulting ISTEA legislation was reauthorized twice, most recently in 2005. Since 1991, the portion of public dollars spent on enhancing existing systems jumped from 55 to 80 percent, mass transportation investments rose to record levels, and a firm basis was laid for promoting urban and suburban reinvestment over decentralization and sprawl.

Location Efficiency and Affordable Housing: He led the development of the Location Efficient Mortgage® , a product that increases housing affordability by recognizing the value of convenient living, which is available in dozens of metropolitan areas, and the new Housing + Transportation Affordability Index℠, to help working families recognize the full value of reducing transportation expenditures. This latter index was used to show that working families now typically pay more for transportation than for housing, published by the Center for Housing Policy of the National Housing Conference in ***A Heavy Load: the Combined Housing and Transportation Burdens of Working Families***. A new web site, https:/htaindex.cnt.org, provides this index, along with maps and data base access for 52 metropolitan areas, was released in April with the support of the Brookings Institution. In the 1980s, CNT conceived of and helped lead first a Chicago-based then a national movement

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

for preventing housing abandonment through better access to information, pathways for more responsible ownership, reduction in energy use, and better tax policies—the tax policies included the creation of low income housing tax credits, which were passed by Congress in 1986 and have anchored the affordable housing finance industry ever since. CNT's approach to reducing energy use was awarded the grand prize in the Enterprise Foundation's National Cost-Cutting Competition in 1990.

Measuring Urban Efficiency: He helped organize and lead the world's first study of location efficiency in metropolitan areas, along with MacArthur Fellow Dr. David Goldstein of NRDC, Hank Dittmar of the Princes Foundation for the Built Environment-UK, Dr. John Holtzclaw of the Sierra Club, and Dr. Peter Haas of CNT. This is the first study to provide firm empirical proof of the relationship between accessibility and convenience and travel demand on a fine-grained geographic information basis. It showed that increases in accessibility and convenience, a proxy for urbanism, result in significant and permanent reductions in travel demand. This work was peer-reviewed and published in a supplemental study for the National Academy of Sciences that provided the nation's first web-based calculator for estimating personal and community-level greenhouse gas emissions from different travel choices. Location efficiency maps and data bases have been assembled for 337 U.S. metropolitan regions and Greater London UK, and independently for 37 Japanese cities and Paris France to date.

Transit-Oriented Development: He co-founded the Center for Transit Oriented Development, whose mission is to promote TOD as a preferred development form, managing it to maximize new economic value creation, and implementing TOD in ways that help communities and investors capture this value systematically. CTOD created the nation's first National TOD Database, covering all 4,000 existing and developing TOD sites in the U.S. These resources provide new performance benchmarks for TOD. With CTOD, he co-authored ***The New Transit Town: Best Practices in Transit-Oriented Development*** (Island Press 2005) and ***Street Smart: Streetcars &Cities in the 21st Century,*** a winner of the Congress for a New Urbanism's Charter Award (May 2007).

Energy Efficiency: CNT has managed large-scale programs in partnership with natural gas and electric utilities and with foundations to deliver cost-effective energy services for multi-family, commercial, not-for-profit and industrial facilities. CNT managed a large-scale neighborhood-based energy cooperative to deliver targeted services in Chicago's Latino Pilsen community, garnering 30 percent participation there. Recently, in partnership with Commonwealth Edison, CNT demonstrated the effectiveness of offering residential customers real-time electricity prices on a round-the-clock basis for a four-year period; the evaluation was positive, and the Illinois General Assembly and the Illinois Commerce Commission have ordered the program taken statewide. In partnership with the Robert Galvin Electricity Initiative and the Electric Power Research Institute, CNT is managing the Smart Grid Initiative, to identify a set of policies for productive electric grid modernization. In partnership with the Preservation Compact, CNT Energy is currently managing a one-stop energy efficiency service to help preserve affordable housing opportunities in Cook County.

Creative Investing: With Julia Parzen, he organized an Urban Sustainability Learning Group to identify principles for collective efficacy and comprehensive regional performance This work helped specify the Metropolitan Initiative, to re-craft the relationship between the federal government and local regions. In 1997-98, the program engaged 1,000 civic leaders

For more information, Scott Bernstein can be contacted at 773 269 4035, scott@cnt.org

in twelve urban regions to address the possibilities and identified new strategies for building effective partnerships to take advantage of both policy changes and market rules; findings are posted at www.cnt.org/resources . This program was succeeded by the Partnership for Regional Livability, Current initiatives include (a) the Bay Area Family of Funds, a $200 Million commitment by social investors to enable community-scale investments in mixed income, mixed use developments in communities in that metropolitan area that exhibit persistent poverty; resulting investments are meeting a "triple bottom line" set of criteria around economic, environmental and social equity outcomes, sponsored by the Bay Area Alliance for Sustainable Communities. Since 1998, institutional investors have invested well over $10 billion in DBL funds nationally, including nearly $3 billion in DBL funds with a regional orientation. (b) the Mixed Income Communities Initiative of Metropolitan Atlanta, intended to foster new approaches to housing affordability through a combination of new commitments to preventing exclusion, and new approaches to lowering the cost of housing through new housing products, better technology, better reuse of existing housing and infrastructure stock and new methods of capturing the value of these economies to the benefits of residents and communities and investors; and (c) Clean Air Counts, a broad Chicago-based scorekeeping coalition devoted to improved regional air quality.

Innovative State and Local Infrastructure Policy: With John Norquist, former Mayor of Milwaukee, and President of the Congress for a New Urbanism, he is currently leading an effort to replace aging elevated highways with surface boulevards and mass transportation. See www.cnu.org He's also leading efforts to examine innovative transportation as a key to revitalization in Ft. Wayne, Indiana, Columbus Ohio, San Antonio Texas, Seattle Washington, Buffalo New York, and many other cities. Recently, with Joel Rogers of the University of Wisconsin, he has helped develop new learning networks of 100 self-styled progressive mayors and 21 governors committed to positive social change through a "high wage, low waste" economy. .

Awards: Bernstein and CNT earned awards from the American Society of Landscape Architects; Renew America; the Enterprise Foundation; the Secretary of Energy; the League of Women Voters; American Institute of Architects; USEPA; Midwest Energy Efficiency Association, the Sustainable Buildings Industry Council, and Mayor Daley of Chicago, among others. In 2006 CNTs office received the coveted "Platinum" rating from the US Green Building Council, and CNT's Energy Smart Pricing Plan received the Chicago Sun Times Innovation Award. Scott is 58, resides in Evanston Illinois & can be reached at scott@cnt.org . See www.cnt.org and www.cnt.org/resources for more information.

STATEMENT OF DOUG GATLIN
OF THE U.S. GREEN BUILDING COUNCIL

BEFORE
THE HOUSE COMMITTEE ON FINANCIAL SERVICES,
SUBCOMMITTEE ON HOUSING AND COMMUNITY
OPPORTUNITY

ON
H.R. 2336, THE GREEN RESOURCES FOR ENERGY EFFICIENT
NEIGHBORHOODS ACT OF 2009

JUNE 11, 2009

On behalf of the U.S. Green Building Council's (USGBC) 20,000 organizational members and nearly 80 local chapters, I would like to thank Chairwoman Waters and Ranking Member Capito for the opportunity to testify about the role that the Department of Housing and Urban Development (HUD) and the federal government can play in improving the energy efficiency and sustainability of residential buildings nationwide. My name is Doug Gatlin, and I am the Vice President of Market Development for the U.S. Green Building Council.

The Imperative

Green homes are inherently affordable homes. Constructing and rehabilitating residential projects to green standards can measurably reduce a resident's financial obligation to a utility bill, result in long-term durability and ease of maintenance, and have a positive impact on individual and community health and well-being. Green homes offer similarly significant benefits for our environment—comprising a critical part of our nation's strategy for addressing climate change.

On the aggregate, buildings are responsible for 38% of U.S. CO_2 emissions per year.[1] In addition, buildings annually account for 39% of U.S. primary energy use;[2] use 13.6% of all potable water or 15 trillion gallons per year;[3] and consume 40% of raw materials globally (3 billion tons annually).[4] The EPA estimates that 136 million tons of building-related construction and demolition debris are generated in the U.S. in a single year.[5] (By way of comparison, the U.S. creates 209.7 million tons of municipal solid waste per year.[6]) It is clear that we must act quickly to reduce the impact of the built environment on our planet.

Critically, sustainability is not limited to environmental performance alone, but rather, hinges on the creation of buildings and neighborhoods that are also socially and economically sustainable. As such, USGBC strives to integrate the theories and practices of social and economic justice within those of sustainable building. The Green Resources for Energy Efficient Neighborhoods (GREEN) Act of 2009 (H.R. 2336) makes important and

[1] Energy Information Administration (2008). Assumptions to the Annual Energy Outlook.
[2] Energy Information Administration (2008). EIA Annual Energy Outlook.
[3] U.S. Geological Survey (2000). 2000 data.
[4] Lenssen and Roodman, 1995, "Worldwatch Paper 124: A Building Revolution: How Ecology and Health Concerns are Transforming Construction," Worldwatch Institute.
[5] U.S. EPA Characterization of Construction and Demolition Debris in the United States, 1997 Update.
[6] U.S. EPA Characterization of Municipal Solid Waste in the United States, 1997 Update. Report No. EPA530-R-98-007.

necessary progress toward achievement of these broader goals while targeting the hard realities of affordability and climate change.

USGBC is particularly encouraged by provisions in the legislation that promise to advance the market transformation to sustainability by:

- providing needed financing mechanisms, such as energy- and location-efficient mortgages, to assist consumers in accessing more efficient properties;
- supporting states and localities in their efforts to improve the energy efficiency of homes in their communities through the Residential Energy Efficiency Block Grant Program;
- providing needed education to consumers and lenders about the benefits of energy efficiency through green banking centers; and
- empowering the private market to move further and faster by advancing the federal commitment to green and energy efficient affordable housing.

By allocating funds through competition based on a host of priorities in the public interest, HUD plays a critical role in both defining and delivering affordable housing. The GREEN Act establishes energy efficiency and green building generally as key public priorities, and provides a framework whereby developers can compete to provide the highest quality housing. This public sector leadership sends a powerful message to the rest of the housing industry, incentivizes private businesses to become experts in green building generally, and ensures that low-income families will maintain access to decent, safe, and affordable housing, even as our society's standards for what is decent and safe continue to rise.

Demonstrating that Green is Affordable

Affordable housing is not a special building type. Instead, the term describes a relationship between people and buildings. Congress has determined that for federally-subsidized programs, the costs to inhabit a residence should not exceed 30% of the gross annual income for the family living in that residence. This calculation includes payments for water, gas, and electricity, which can be significant and unpredictable. Compounding these potential costs, more than

80 percent of housing units assisted by HUD are 15 to 30 years old,[7] and many low-income housing units are among the least efficient housing in the country.

When paid directly by low-income residents, high utility costs erode and in some cases entirely undermine affordability. Indeed, low-income households spend on average 19.5% of annual income on home energy costs, while the average for median-income households is just 4.6%. These costs can become an even greater burden on low-income families during the winter months, when home energy costs may climb as high as 70% of monthly income.[8]

Affordability is similarly in jeopardy where utilities are paid by HUD or another public agency, as these recurring costs limit the public funds that are available for the construction and maintenance of affordable housing. Indeed, HUD spends more than $5 billion annually in direct and indirect utility costs.[9] Green building offers opportunities to reduce energy and resource consumption, enabling lower utility costs and critical savings for agencies and residents alike.

An affordable housing project developed in Michigan by the Genesis Nonprofit Housing Corporation demonstrates the economic and environmental savings that are possible through green building. The project was built in two phases utilizing the same basic design and the same builder, but phase two was built to LEED standards and certified by USGBC. Compared to phase one, the LEED building added just 2% to the initial construction cost, but the owner reports that in its first two years of operation the LEED certified building produced an impressive 26% savings on electricity and 41% savings on gas.

Public housing agencies have experienced similar successes. Over the past two years, the District of Columbia Housing Authority (DCHA) has implemented major green building improvements in 5,000 units of public housing across 31 separate properties. These improvements included HVAC upgrades, new lighting, appliances, and water fixtures for residents. As a result, DCHA has reduced its overall utility budget by 24%, from $16 million annually to $12.1 million in 2008. After paying capital costs for these improvements, DCHA expects to net approximately $1 million per year indefinitely. Additionally, DCHA has estimated $2.3 million in annual

---

[7] Harvard University Graduate School of Design, Public Housing Operating Cost Study, June 2003 available at http://www.gsd.harvard.edu/research/research_centers/phocs/documents/Final%20Report.pdf (last visited June 10, 2009).

[8] National Fuel Funds Network, National Low-Income Energy Consortium, et. al, The Cold Facts: The First Annual Report on the Effect of Home Energy Costs on Low-Income Americans (2001-2002), available at http://www.nliec.org/facts.pdf.

[9] U.S. Government Accountability Office, Green Affordable Housing, GAO-09-46, October 2008, available at http://www.gao.gov/products/GAO-09-46 (last visited, June 10, 2009).

operating and maintenance savings from fewer emergency repairs and replacements.[10]

Nationally, nearly 200 energy performance contracts have been undertaken by public housing authorities, resulting in gross savings to HUD of about $50 million annually.[11] Due to program requirements, there is currently no means of encouraging similar cost-savings in the 1.6 million units of privately-owned housing receiving project-based subsidies from HUD. The GREEN Act provides HUD with the needed congressional authority to develop such an initiative.

Green Building and Health

Many low-income residents are among our nation's most vulnerable citizens, including children, seniors, and persons with chronic disabilities. For these households in particular, asthma, allergies, and even cancer can result from or be exacerbated by exposure to toxins in the built environment.

Asthma is now recognized as the leading cause of school and work absences, emergency room visits, and hospitalizations.[12] Asthma disproportionately affects children from lower-income families and from specific racial and ethnic groups.[13] According to HUD, approximately 21% of asthma cases in the U.S. are linked to dampness and mold, at an annual cost of approximately $3.5 billion.[14] Although these costs are not directly paid by HUD or the federal government, they are real costs that draw energy and resources from predominately low-income and minority communities.

While growing anecdotal evidence helps to confirm the health benefits of green building practices, we need additional, more robust statistical research to specifically quantify those benefits. HUD is currently undertaking such research in partnership with the Centers for Disease Control and Prevention. Additionally, organizations such as the National Center for Healthy Housing are working on longitudinal studies of the health of residents before and after a green rehabilitation project, including projects built to LEED standards.

---

[10] Presentation by the DC Housing Authority at D.C. HUD Field Office Energy Forum, March 18, 2009.
[11] GAO, Green Affordable Housing, p15.
[12] U.S. Department of Housing and Urban Development, HUD Healthy Homes Strategic Plan, p3, September 2008, available at http://www.hud.gov/offices/lead/library/hhi/DraftHHStratPlan_9.10.08.pdf (last visited June 10, 2009).
[13] U.S. Environmental Protection Agency, Fast Facts on Children's Environmental Health, 2008, available at http://yosemite.epa.gov/ochp/ochpweb.nsf/content/fastfacts.htm (last visited June 10, 2009)
[14] HUD Healthy Homes Strategic Plan, p3.

With an emphasis on the use of non-toxic materials and proper ventilation, among other elements, green building targets improved indoor air quality for residents. Public health demands that such strategies be adopted in both market rate *and* affordable housing. Failure to do so would result in an increasing health disparity for low-income families and have a particularly pronounced and disparate impact on communities of color. Using 2006 Census data, nearly three times as many blacks (24.3%) and more than twice as many Hispanics (20.6%) live in poverty as non-Hispanic whites (8.2%). It is imperative that these communities share in the financial and social benefits of modern green building practices. The GREEN Act is an important step toward achieving this goal.

Challenges in Greening Affordable Housing

USGBC estimates that more than 190 localities have implemented various green building policies. Many of these local laws apply to affordable housing efforts, including one of the earliest right here in the District of Columbia, which maintains requirements similar to those in the GREEN Act for affordable housing. These local requirements have not impeded the development of affordable housing, but rather, have spurred private developers and public housing authorities to achieve better and smarter results, meeting both short- and long-term affordability concerns.

While case studies increasingly document the benefits of green affordable housing, several barriers will need to be addressed to enable the implementation of green improvements in the whole of the HUD-assisted and public housing stock. Chief among these is the need to verify that green measures are conscientiously selected and properly installed to optimize building performance. USGBC values third-party certification as an important tool to this end. Importantly, it may prove challenging for public agencies to ensure that projects receiving credit for green building measures in the funding application process have properly implemented such measures when construction is completed many months later.

Additionally, residents and property managers will need training and support for operations and maintenance issues unique to their green buildings. For example, broad education will be required to ensure that cleaning and maintenance practices do not reintroduce toxic chemicals or products into a building, compromising indoor air quality measures that have a heightened benefit for low-income families. This challenge is not unique to HUD or to affordable housing, but is simply a reminder that a sustained commitment to building operations and maintenance is required to achieve the benefits of green building throughout a building's life cycle.

Tools for Greening Affordable Housing

LEED for Homes

First released in 2000, USGBC's LEED Green Building Rating System® was originally focused on the commercial building sector. In subsequent years, USGBC has developed additional systems for other market sectors, including the launch in 2007 of a residential rating system. LEED for Homes is based on the successful LEED model, but with a number of changes intended to minimize the costs of certification and verification while still demonstrating a level of confidence in the final result. This rating system was designed with specific input from the affordable housing community.

All residential projects seeking LEED certification must verifiably demonstrate that they have been built as designed, and that relevant equipment was properly specified and installed. Although on-site inspections and performance testing result in additional up-front costs, USGBC believes that such measures are essential to optimizing projected cost savings or other qualitative benefits throughout the operation of a green building. This is especially true in the case of innovative measures or those that require contractors to modify their traditional procedures.

Verification measures required by LEED for Homes include:

- **Green Inspection:** LEED requires that all homes certified under the program have a minimum of two on-site inspections from a Green Rater to verify that green features are installed and functioning as specified.
- **Home Energy Rating System (HERS) Rating:** LEED requires that all homes certified under the program be HERS rated and Energy Star certified.
- **Third-party verification:** Every LEED certified home is reviewed by a third-party assessor for accuracy.

To date, 13,000 housing units have registered with LEED for Homes, and 2,200 have been certified.

USGBC Affordable Housing Initiative

Affordable housing units account for 37% of the 2,200 units certified nationwide through LEED for Homes. An additional 4,000 affordable units have registered with LEED for Homes, indicating an intent to complete the certification process.

The ability and desire of affordable housing developers to seek certification through LEED for Homes is an important measure of USGBC's continued success with this rating system. As part of this effort, USGBC has teamed up with the Home Depot Foundation to provide almost $500,000 to offset the direct, if modest, costs of LEED for Homes verification for affordable housing projects. Additionally, USGBC is engaged in efforts to educate the broader green building community about best practices for developing green affordable housing. USGBC provides numerous educational opportunities for affordable housing developers and public financing agencies, including a two-day Affordable Housing Summit at the annual Greenbuild Conference and Expo. USGBC is also seeking to enable individual staff at nonprofit affordable housing developers to achieve the LEED Accredited Professional (AP) designation, a credential demonstrating an understanding of green building practice.

USGBC actively collaborates with affordable housing organizations and other stakeholders to promote green affordable housing. For example, USGBC actively participated in the development of the Enterprise Green Communities Criteria and continues to provide direct consultation to this national green affordable housing standard. Green Communities is aligned with the LEED rating systems, and USGBC strongly supports Enterprise and its work to support and advance green affordable housing.

Expanding the Private Green Residential Market

Green homes are currently being embraced by innovators and early adopters in the residential marketplace, including many affordable housing developers, community development organizations, public agencies, and private investors committed to providing quality, affordable housing.

This pattern is consistent with the early stages of the green commercial market, which provides a powerful lesson for accelerating uptake of green building practices in the residential sector. Upon the release of LEED in 2000, the majority of the few building projects committed to LEED certification were "going green" based on a values-oriented commitment as opposed to potential economic gains. Relatively few green products and systems were available in the marketplace, and those that were available were largely untried and expensive. Additionally, there were but a handful of building industry professionals with the knowledge and experience in green building practices to successfully deliver a green building project without incurring significant additional time and expense on the "learning curve."

The growth of the green market has been exponential, comprising 2% of non-residential construction starts in 2005; 10-12% in 2008; and a projected 20-25% by 2013.[15] The economic impact of this growth is similarly significant. McGraw-Hill Construction projects that the overall green building market, including both non-residential and residential buildings, is likely to more than double from today's $36-49 billion to $96-140 billion by 2013.[16]

To rapidly mainstream green building practices in the residential sector in order to recognize both the economic and environmental benefits of energy savings sooner rather than later, a proactive effort is needed to build professional capacity, and educate owners, tenants, and building managers about the benefits of green building. The provisions of the GREEN Act would advance the marketplace on each of these fronts. Indeed, by promoting the creation of green banking centers in communities nationwide, the legislation would help to ensure that the owners, tenants, and managers of residential properties can readily obtain information about opportunities to finance energy-saving and green improvements and to connect with established programs and professionals. Coupled with an enhanced focus on the provision of energy- and location-efficient mortgages by the nation's lenders, these provisions can help to jumpstart the creation of new green housing. The Residential Energy Efficiency Block Grant program will help to promote similar efforts in existing housing, will create jobs, and will catalyze the development of a scaled and skilled workforce to make energy efficient, green renovations more accessible to residential owners and tenants.

Federal Leadership by Example

A federal commitment to energy efficient and green housing, as expressed in the provisions of the GREEN Act, can responsibly leverage taxpayer dollars and the tremendous purchasing power of the federal government to further drive the market for green building practices and products in the residential sector.

Governments at all levels have been highly influential in the growth of green building, both by requiring green building standards for their own buildings and by creating green building incentives for the private sector. From the Department of Energy's support for the initial development of LEED, to provisions in the Energy Independence and Security Act of 2007 (EISA), to the many cities and states that are using LEED, the public sector has demonstrated considerable vision and leadership in the transformation of the built environment. Currently, 12 federal agencies or departments, 31 state

[15] McGraw Hill Construction (2009). Green Outlook 2009: Trends Driving Change.

[16] *Id.*

governments, 190+ local governments, 16 public school jurisdictions and 39 higher education institutions have made various policy commitments referencing, using, or encouraging LEED.

These commitments are having a dramatic impact on the green building market, bringing to fruition a growing and impressive number of green, public spaces. To date, federal, state, and local governments have a total of 742 projects certified under LEED and another 6,175 pursuing certification.

The acceleration of energy efficiency and green building standards for properties and projects receiving financial assistance from HUD presents the opportunity to forge a greener, more energy efficient, healthier, and prosperous path for the nation's public and assisted housing. By leveraging the unparalleled purchasing power of federal dollars to support green affordable housing, HUD can not only reduce the significant environmental footprint of the projects it supports, but also speed the creation of green affordable housing by the private sector, and save America's low-income families needed dollars through reduced utility bills and operating costs.

Statement of Jerry Howard, on behalf of the

National Association of Home Builders (NAHB)

"H.R. 2336 – GREEN Act of 2009"

Subcommittee on Housing and Community Opportunity
House Committee on Financial Services

June 11, 2009

Madame Chair, Ranking Member Capito, and distinguished members of the Subcommittee, I want to thank you for the opportunity to present testimony today on behalf of the National Association of Home Builders (NAHB). My name is Jerry Howard, and I am the President and Chief Executive Officer of NAHB representing 200,000 members that, in turn, employ millions of individuals in the home building, remodeling, multifamily construction, property management, subcontracting, design, housing finance, building product manufacturing, and light commercial construction industries. The housing industry has made tremendous strides in promoting sustainability and energy efficiency, recently completing work on the *only* green building standard in the nation to receive approval from the American National Standards Institute (ANSI) – the *ICC-700 National Green Building Standard*™. My goal today is to offer additional input on how the government can more effectively and affordably incorporate energy efficiency and green building into the nation's housing stock, including through the use of national housing programs.

I. Introduction

Over the last fifteen months, the housing industry has successfully implemented one of the most robust efforts to promote sustainability and building efficiency nationwide. NAHB and the NAHB Research Center (NAHBRC) have implemented a national green building program (www.nahbgreen.org), completed work on the *only* national green building standard to receive approval from ANSI – *ICC-700 National Green Building Standard*™, trained over 3,300 home building professionals in the practice of green building design and construction, and certified two entire housing developments to the *National Green Building Standard*™. Our commitment to promoting green building, sustainability, and energy efficiency is rivaled only by our commitment to ensuring that the government housing programs and financing for housing are functional, effective, and quickly restored to help aid in the quick recovery our nation's housing economy.

Facing the brunt of the economic downturn and the worst housing market since the Great Depression, our industry has experienced devastating losses and historic declines. Falling from a height of two million new homes constructed in 2006 to less than 500,000 projected for 2009, the housing industry has suffered overwhelming setbacks that continue to force small businesses (80% of NAHB members) out of business. Because NAHB members build about 80% of all the new homes in the United States, we have a major role to play in the manner in which energy efficiency and sustainable technologies are introduced into the housing stock. Despite the downturn, NAHB has not wavered in its commitment to promoting green building and energy efficiency in a manner that is affordable, effective, and legitimately improves energy efficiency for the next generation of housing. Thus, we look forward to providing additional input on this legislation to make it a part of an effective approach towards improving the efficiency of our nation's housing programs.

II. H.R. 2336 - *The GREEN Act of 2009*; Comments and Recommendations

NAHB has been actively engaged in providing substantive input on various drafts of H.R. 2336 (the GREEN Act) and participated in planning sessions throughout the early development of this legislation. NAHB is pleased to see the incorporation of many of our ideas, suggestions, and feedback into the final product. NAHB still believes that there are areas that would benefit from additional clarification, as outlined below, but that the legislation generally promotes green building and sustainability for HUD-assisted properties in a manner that is reasonable and appears to be largely voluntary. The scope of the GREEN Act and the new programs that it creates are ambitious, but the intent is thoughtful and NAHB hopes that the resources will ultimately be available to develop the programs into effective tools to promote sustainable principles. An outline of our comments and recommendations to the GREEN Act is below:

Section 2 – Definitions.

- NAHB notes that in Section 2 (3), the definition of "HUD Assistance" includes not only those programs directly subsidized by HUD, but also "provided by HUD through loan insurance or guarantee." This definition would include Federal Housing Administration (FHA)-insured single family and multifamily loans. FHA single family loans presently comprise 28% percent of the mortgage market. **NAHB recommends additional clarification on which requirements will apply to FHA versus the requirements for direct subsidy programs or competitive grants.**

Section 4 – Basic HUD Energy Efficiency Standards and Standards for Additional Credit.

- In Section 4 (a)(1)(B), the basic HUD standard for single family new construction is listed as the 2009 International Energy Conservation Code (IECC). The wording "complies with the applicable provisions" preceding the code reference provides little, if any, flexibility for States or local governments that are using energy codes that may be comparable, or in some cases using a code that exceeds 2009 IECC – e.g., California's Title 24. Additionally, energy codes themselves are limited because they do not cover equipment efficiency (e.g., heating ventilation and air-conditioning (HVAC)) as part of the comprehensive efficiency target. As heating and/or cooling comprises roughly 30% of the energy consumed in a home, it would be prudent to include language that recognizes equipment efficiency as part of the overall efficiency performance of the structure. It is also important to provide necessary flexibility to cover States or local areas that have energy codes that "meet or exceed" the code reference targets even if the exact code itself is not adopted. **NAHB recommends adding clarifying language to allow for compliance with energy codes of comparable efficiency to the 2009 IECC, even if the exact code is not adopted. NAHB further recommends including language to provide for equipment efficiency as part of an integrated approach to building efficiency, as this is not covered by the energy code, yet is a major factor in overall energy performance.**

- In Section 4(a)(1)(C), the basic HUD standards for existing structures to comply with the energy efficiency standards is proof of a 20% reduction in energy consumption, verified by energy audits performed both before and after rehabilitation or improvements. In this section, "existing structure" and "rehabilitation or improvement" are left undefined. This is important when making determinations about what qualifies as an existing structure. For example, if a homeowner purchases a new home built in 2009 and shortly thereafter has to sell it, does it now qualify as an "existing structure" under this section? Also, what accommodations are made for

historical structures, which may have strict requirements against certain changes under State or local laws? Does "rehabilitation" mean only major rehabilitation, or any general improvements made for efficiency? It is difficult to determine how, and in what manner, the basic standards apply. **NAHB believes clarifying definitions for both "existing structure and "rehabilitation or improvement" may be helpful in this section.**

- In Section 4(b)(4)(E), NAHB applauds the addition of the "National Green Building Standard" as one of the options for additional credit. For consistency and to conform with other code and standard references in the legislation, NAHB suggests a specific reference to the official title of the standard, as approved by ANSI, as "ICC-700 2008 National Green Building Standard" in every place that it appears in the legislation. **NAHB recommends referencing the national green building standard by its official ANSI-approved title – "ICC-700 2008 National Green Building Standard" to be consistent with other code and standard references in the GREEN Act.**

- Section 4(c) establishes authority for the HUD Secretary to apply energy efficiency and green building standards to "any covered federally assisted" under this subsection. This section states that "covered federally assisted housing" (Section 4(c)(3)(A)) is "any residential or nonresidential structure for which any HUD assistance is provided." Referring back to the general definitions under Section 2 of the bill, this would include FHA-insured loans. NAHB understands that the HUD Secretary ultimately would decide which requirements should apply to FHA-insured loans, but as FHA single family loans currently represent nearly one-third of the market, and the share of FHA-insured multifamily loans is also increasing, it will be extremely important to understand which energy requirements will be applicable for FHA well in advance. **NAHB cautions against erecting potential impediments to the use of the FHA program during the critical housing recovery period.**

Section 13 – Energy-Efficient Certifications for Manufactured Housing with Mortgages.

- This section seeks to amend Section 526 of the National Housing Act (12 U.S.C. 1735f-4(a)). In amending the statute, Section 13 removes the exemption for manufactured housing, but also inserts a new provision that will "require" energy ratings for "single- or multi-family residential housing subject to a mortgage insured under this [National Housing] Act." NAHB is concerned again about the potential application of mandatory energy ratings for FHA-insured mortgages and that it could be an impediment to the use of the program slowing the housing recovery. It is difficult to determine the applicability (or lack thereof), per this section, to FHA mortgage insurance. If this is indeed a prerequisite for FH-insured mortgages, it would difficult to implement on a broad scale due to a lack of available professionals to perform such ratings and this requirement could be incredibly problematic if mandatory for the entire FHA mortgage market. **NAHB recommends clarification on which insured mortgages are subject to the energy rating mandates set forth in this new provision and further cautions against imposing such requirements for the FHA program.**

Section 19 – HOPE VI Green Developments Requirement.

- NAHB notes that the mandatory requirements for HOPE VI residential developments are inconsistent with the mandatory requirements for HOPE VI non-residential developments in this

section. Under residential, the mandate requires compliance with the Green Communities Criteria Checklist, a private green rating tool that is not approved by an unaffiliated third-party standards developing organization (SDO). Meanwhile, the requirements for non-residential development are unspecified, allowing the HUD Secretary to make a determination based on benchmarks. It is inconsistent to mandate a private rating tool for one type of HOPE VI development, but to allow HUD to consider benchmarking and other green rating systems for other types of HOPE VI development. **NAHB recommends allowing the mandatory requirements for HOPE VI residential development to mirror the mandatory requirements for HOPE VI non-residential development. NAHB further recommends against mandating private green rating systems that are not approved by unaffiliated standards developing organizations (SDOs), as this conflicts with federal law regarding use of voluntary consensus standards – see 1996 National Technology Transfer Act (P.L. 104-113).**

III. Specific Subcommittee Issues or Questions – *GREEN Act of 2009*

In response to the specific issues and questions posed for consideration at today's hearing, NAHB submits the following:

- ***How will the GREEN Act improve the energy efficiency of single- and multi-family housing units?***

The underlying variable that exists when trying to estimate energy performance results of efficiency requirements for any building type is ultimately the successful enforcement and implementation of such requirements. Many state and local jurisdictions are resource-deficient in providing the support and training necessary to enforce upgraded code requirements on a broad scale. This impairs the successful implementation of such requirements, and can be an obstacle for any code-based program. The GREEN Act may face some of the limitations of this code-based problem, as it does create basic code minimums. However, the challenge is not about simply increasing minimum thresholds, but rather how to increase implementation to produce meaningful results.

Furthermore, the GREEN Act sets new energy code minimums and promotes green building, but ultimately resident behavior and other non-code related consumption will have to be addressed to achieve the best results. The DOE's Energy Information Administration reported that in 2007, over 48% of the energy consumed in a home is the result of laundering, cooking, refrigerating, and other electronics use, or "plug-connected" energy consumption. Even the greenest home can perform poorly if residents are offsetting efficiency gains in builder-placed features with excessive appliance or electronics use and improper maintenance. The best way to deliver greater efficiency is to provide incentives for higher-efficiency appliances, to develop educational materials and communicate best practices to residents on how to operate a home more efficiently, and to provide resources for better state and local code enforcement on the ground.

The GREEN Act will likely have the most impact with respect to promoting green building, as the bill offers many different voluntary approaches to compliance. The bill will likely also further promote advanced renewable energy systems, as it provides grants and programs to

implement such systems. Overall, the GREEN Act will like affect energy efficiency in the components of the bill that promote voluntary compliance with additional benchmarks or grants to install advanced systems. The GREEN Act will not likely advance as much efficiency with code-based minimum thresholds or with requirements for energy ratings, which ultimately only measure, not improve energy performance, and have real costs associated with them.

- ***In what ways will the GREEN Act encourage the use of energy and location efficient mortgages?***

Some lenders and Fannie Mae have promoted the availability of Energy efficient mortgages (EEMs) and location-efficient mortgages (LEMs) from time to time, however, very few loans have actually been produced as a result of these efforts. One reason for the apparent lack of home buyer enthusiasm for EEMs and LEMs is that purchasers typically do not receive a meaningful benefit, such as a reduced interest rate or reduced closing costs as an incentive to choose these products over other types of loans. Another significant barrier to wider use of these mortgage products is the general failure by the appraisal system to recognize the value that energy- and location-efficient features add to these homes. NAHB is working with the Appraisal Institute and others to educate appraisers in this regard.

It is difficult to determine if a specific number of EEMs and LEMs must be insured by a certain date will automatically translate into greater use of the mortgage products. One challenge of LEMs specifically is that it becomes difficult to mandate consumer behavior in a mortgage document. For example, because a resident's home is near a public transportation outlet does not necessarily translate into greater use of public transit or lesser use of personal automobiles. NAHB has no objection to EEMs or LEMs, but it is incredibly difficult to determine if the GREEN Act will encourage greater use of the products, as they have been available, but underutilized, for many years.

- ***What are the benefits of energy efficient improvements on low-income housing developments and low-income residents?***

With respect to low-income housing development and low-income residents, there are a number of items to consider when assessing the benefits of energy efficient improvements. For example, is the reduction in utility bills, as a result of efficiency upgrades, accurately specified for an increased mortgage payment for the lower-income family attempting to buy the more efficient home? Also, does the reduction in utility bills also cover additional ongoing costs of mortgage insurance, property insurance, and property taxes? Furthermore, do the increased up-front costs of efficiency investments tip the low-income family over one of the thresholds where a mortgage does not become available or becomes available only at a higher rate, requires mortgage insurance, increases the rate or initial fees on the mortgage insurance, or triggers additional points or origination fees paid up front? When all these factors are considered for low-income families, regardless of projected energy savings, it may be the case that the lower-income family may not be able to afford specific efficiency features of a newer home. Nevertheless, NAHB supports providing the most cost-effective efficiency increases in homes that still accommodate the most buyers, particularly those that are the most price-sensitive, i.e., the low-income families.

IV. H.R. 2454 – *American Clean Energy Security Act of 2009* and H.R. 2336 – *GREEN Act of 2009*; Conflicts and Barriers to Successful Implementation

The challenge of climate change affects everyone, including the residential construction industry. NAHB has already responded in many ways through investment and support of green building, as well as promoting energy efficiency in both new and existing housing via numerous national programs. These include NAHB's partnership with the EPA's Energy Star for Homes program, Department of Energy (DOE)'s Building America Program, HUD's Partnership for Advancing Technology in Housing (PATH) program, and consistent support for incentivizing super-efficient housing stock, offered through the Internal Revenue Code Sections 25C, 25D, 45L, and 179D for building and home efficiency. NAHB has been committed to improving energy efficiency in housing, and the result has been dramatically more efficient new homes.

The DOE's Energy Information Administration (EIA) reports that newer homes, i.e., homes built after 1991 – represent the smallest fraction, 2.5%, of all annual national energy consumption in 2001:

Energy Consumption in 2001 in Trillions of Btu

Total	**96,498**	**100.00%**
Residential Sector	**20,228**	**20.96%**
Manufactured Housing	**1,301**	**1.35%**
Fossil Fuel Used to Generate Electricity	815	0.84%
Consumed by Residence	486	0.50%
Single Family and Multifamily Built before 1991	**16,498**	**17.10%**
Fossil Fuel Used to Generate Electricity	8,743	9.06%
Consumed by Residence	7,755	8.04%
Single Family and Multifamily Built 1991-2001	**2,429**	**2.52%**
Fossil Fuel Used to Generate Electricity	1,386	1.44%
Consumed by Residence	1,043	1.08%

Sources: Annual Energy Review by the Energy Information Administration; the 2001 Residential Energy Consumption Survey, EIA.

This is extremely important, as it shows that even if all new homes built between 1991 and 2001 consumed zero energy, it would have saved only 2.5% of the total energy consumed in the U.S. for that entire decade. Because building codes and construction practices have consistently, and in some cases rapidly, improved over time, newer homes are dramatically more energy efficient today. The efficiency gains that have already been made in new housing are remarkable, and they will continue to grow as green building becomes more mainstream and a more thoughtful and integrated approach to building efficiency is developed.

One of the most important aspects of delivering more energy efficient housing is the impact on affordability. NAHB believes that the GREEN Act attempts to develop incentives and programs to help encourage greater amounts of efficiency for the nation's housing stock without damaging affordability and to return energy savings to consumers – or to the government – within a reasonable time frame. This "payback" period – i.e., the time it takes to recoup upfront costs in energy savings for an efficiency feature or energy code requirement – is important to everyone. However, it is even more important for lower and moderate income families that are the most price-sensitive, that share the largest burden of rising energy costs as a percentage of income, and that have the least amount of upfront cash to invest in

housing. NAHB believes that it is not unreasonable for consumers to expect to realize energy savings paybacks from efficiency features within the first 10-12 years that they occupy a dwelling. This is why the industry is committed to ensuring that efficiency is delivered in a manner that is appropriate and affordable so that the most efficient housing available – i.e., newer homes and buildings – is not out of reach for families that have the most difficulty qualifying for and affording homes that will ultimately cost more.

Unfortunately, a provision included in H.R. 2454 – *The American Clean Energy Security Act of 2009,* also referred to as the "cap-and-trade bill," recently passed by the House Energy and Commerce Committee, has the potential to derail the success of the GREEN Act. In Section 201 of H.R. 2454, new energy code requirements are created for all buildings and homes that far exceed the green building and efficiency programs set forth in the GREEN Act. The new building requirements in H.R. 2454 begin at date of enactment requiring compliance at least 30% above 2006 IECC or ASHRAE 90.1-2004 ("baseline codes") and jump to 50% above baseline codes by January 1, 2014. The new federal code targets then increase by 5% every 3 years until 2029 when the target reaches a 75% above baseline code benchmark. States, and in some cases local governments, are given one year to certify to the DOE that they have adopted the new federal targets, or the DOE will automatically apply the new code federally and collect enforcement fees to implement the code as a federal program. Additionally, for buildings and homes that do not meet the federal code requirements – or an equally stringent State or local requirement – it will become "unlawful" to occupy the home or building. Violations and federal civil penalties will be assessed daily against builders, building owners, and those selling non-compliant homes and buildings.

As the green building and efficiency incentives set forth in the GREEN Act are well below the new energy code requirements passed in H.R. 2454, it is doubtful that the building efficiency programs envisioned for the GREEN Act will ever be realized due to conflicting compliance frameworks. NAHB argued during consideration of H.R. 2454 that green building and sustainability are not adequately accommodated by aggressive energy code increases because the framework for sustainability is much broader than energy efficiency alone. NAHB also pointed out that nearly every national green standard and rating system available today (*National Green Building Standard*™, LEED, Green Globes, and Green Communities Criteria Checklist) does not achieve the highest energy code levels specified in H.R. 2454 despite the fact that such standards and systems deliver more environmentally-sound buildings. Finally, NAHB argued that abrogating States' rights to determine appropriate building efficiency benchmarks for structures within their jurisdiction is unconstitutional and will likely result in inefficient application of efficiency standards to address varying climate zones and specific needs. For example, energy efficiency in California is entirely different than energy efficiency in West Virginia and the climate-specific variability, which is embodied in many green programs, is lost if an energy code is federalized.

Despite the dramatic downturn and the virtual halt of new construction in the U.S., NAHB believes in preserving affordability for the new, and more energy efficient, homes that must be built once the market recovers. The mandatory federal energy code requirements in H.R. 2454 will not only undo the efforts of the GREEN Act, but will also inflict serious harm on marginal first-time homebuyers and lower-income families attempting to move into more efficient dwellings. Mandated energy code criteria that increase upfront costs in exchange for a future payback that may take decades or longer may work better at the top of the market, or even in the average case, yet have the effect of penalizing consumers at the lower end of the market.

Although HUD assisted properties may legitimately deserve different consideration, it is apparent that H.R. 2454 requires all homes and buildings, whether constructed with HUD funding, guaranteed by HUD insurance, or are in the private market, to be subject to the same energy code requirements nationally. Because the green building incentives and efficiency programs envisioned in the GREEN Act fall short of the federal targets in H.R. 2454, the efficiency programs for homes and buildings that would be incentivized under the GREEN Act would be irrelevant and non-compliant. Finally, because of conflicting compliance regimes and inconsistent building standards created by both pieces of legislation, it is possible that the attempt to deliver a workable solution for improving efficiency in government housing programs and the affordable housing market will be negated with expensive energy code requirements that apply civil penalties and violations for non-compliance.

Incorporating energy efficiency and sustainability within our nation's affordable housing programs is a goal that NAHB collectively shares with the Subcommittee. NAHB has been a pioneer in establishing a robust and rigorous green building program and a national standard for residential construction that delivers sustainability affordably to our nation's housing stock. NAHB's support for increased energy code compliance through the national model code development process and our partnership with several federal agencies to promote energy efficiency has delivered millions of new energy efficient homes that use the least amount of energy out of every building sector nationally. Therefore, it is extremely disappointing that the underlying conflicts with H.R. 2454, to which the GREEN Act is intended to be included, diminishes the incentives and thoughtful programs supporting green building for government housing programs that benefit everyone.

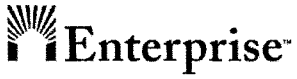
V. Conclusion

NAHB believes that the approach and intent of the GREEN Act is a good first step to encourage additional energy efficiency in the government housing program structure. While the legislation would benefit from additional clarification in some sections, NAHB applauds the efforts to preserve flexibility in acknowledging green building compliance and to promote supplementary efficiency programs, administered through HUD, that cover everything from appraisals to advanced renewable energy systems. NAHB looks forward to continuing to work with the Subcommittee on the GREEN Act and in providing additional feedback on delivering sustainability to the nation's housing stock in a manner that is effective and affordable.

NAHB's commitment to green building and to developing the *only* national green building standard to receive approval from ANSI is evidence of our hope that sustainability and energy efficiency will continue to flourish on a broad scale. NAHB is dismayed at the approach taken in H.R. 2454 with respect to aggressive federal energy code mandates that neither accommodate green building, nor provide any preservation for reasonable housing affordability for the next generation of housing. Greater energy efficiency in housing is critical, but it cannot be achieved through unrealistic energy code requirements that do not consider paybacks to consumers, or that prices-out the families that have the most to gain from energy efficiency savings, i.e., low- and moderate-income households.

NAHB urges the Subcommittee to support a removal of Section 201 of H.R. 2454 so that the approach taken in the GREEN Act has a chance to succeed. The collaboration of many groups and individuals, including NAHB, on the GREEN Act, and its incentive-based approach to efficiency provides a chance to maintain housing affordability and keep newer, more energy efficient homes

available so that everyone, at all price points, can enjoy a green and energy-efficient home. During this time when we are facing unprecedented economic challenges, as well as environmental concerns, we urge Congress to ensure that the ability of the government housing programs to serve lower and moderate income families is maintained while simultaneously increasing energy efficiency standards. As always, NAHB stands ready to work with you to achieve that goal.



Testimony of Doris W. Koo
President and Chief Executive Officer
Enterprise Community Partners
For the Financial Services Subcommittee on Housing and Community Opportunity
United States House of Representatives

"H.R. 2336: the Green Resources for Energy Efficient Neighborhoods Act of 2009"
June 8, 2009

Introduction

Chairwoman Waters, Ranking Member Moore Capito and members of the Committee, thank you for this opportunity to testify on the "GREEN Act." I am Doris Koo, president and chief executive officer of Enterprise Community Partners (Enterprise).

Enterprise is a national nonprofit organization and we create opportunity for low- and moderate-income people through fit, affordable housing and diverse, thriving communities. Enterprise provides financing and expertise to community-based organizations for affordable housing development and other community revitalization activities throughout the U.S. For more than 25 years, Enterprise has invested over $10 billion to create more than 250,000 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.

Enterprise commends the Subcommittee for convening this hearing. The timing could not be better, building on the investments made in the American Recovery and Reinvestment Act (ARRA) for green housing and looking ahead to a lively debate on climate change and transportation policy. With the economic crisis and recession hitting virtually every part of our society, it is abundantly clear that housing, environmental and transportation challenges facing low-income people and communities are more severe than ever before.

The principles and practices of "green" development offer evidence-based, cost effective ways to address current and longstanding housing challenges, rising energy and transportation costs and the effects of global warming, while creating jobs at potentially huge scale. "Greening" affordable housing – making it more energy efficient, healthier and more environmentally responsible – is also a tangible way to ensure that the enormous promise of the emerging green economy includes opportunities for everyone in our society. And green development provides a powerful framework for rethinking how we create and sustain communities that are better places for today and for future generations.

Energy efficiency in very low-income housing at scale can also help fight climate change. Residential units consume 22 percent of the nation's energy and cause 20 percent of our greenhouse gas emissions.[1] 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

Enterprise™

1980 and many were poorly constructed. Not surprisingly, lower income households use 28 percent more energy per square foot than higher income households, primarily because they live in older, less energy efficient homes, according to the Energy Programs Consortium.[ii]

Research on the carbon reduction potential from energy efficiency in very low-income homes suggests significant impact. One recent analysis suggests 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.[iii] 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.[iv]

The GREEN Act will significantly improve the energy-efficiency of rental units and single-family homes. Enterprise's extensive research and evaluation effort show that green affordable housing built to the Green Communities Criteria can be extremely energy-efficient and cost effective. Early data on 45 completed Green Communities developments reveal an average of 20-30 percent energy and water savings over code. Similar to the energy requirements under the GREEN Act, whole-building energy and water efficiency are mandatory requirements for meeting the Green Communities Criteria. Green Communities projects must achieve energy performance levels appropriate for the building type by meeting Energy Star home standards, exceeding ASHRAE 90.1 2004 by 15% or exceeding current baseline performance in existing housing by 15% after rehabilitation improvements. Projects are also encouraged to exceed these mandatory performance levels through additional building envelope improvements and the addition of renewable energy systems.

It should also be noted that increasing energy efficiency in low-income homes attacks a significant contributor of greenhouse gas emission in the U.S. – residential homes – at the root of the problem: the buildings themselves. And it reduces emissions for the long term. While critically important, other approaches to ensuring equity in climate change policy, such as helping low-income people afford higher energy costs, do not deliver these enduring systemic benefits.

Enterprise Community Partners' Green Communities Initiative

Enterprise is working to bring the benefits of sustainable development to low-income people at an unprecedented scale through the Green Communities initiative. Through Green Communities, Enterprise provides funds and expertise to enable developers to build and rehabilitate for-sale houses and rental apartments that are healthier, more energy efficient and better for the environment – without compromising affordability. Enterprise also works with state and local governments and with Congress to develop policies that lead to more environmentally sustainable homes and communities.

Green Communities homes are built according to the 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 $650 million in equity, loans and grants to create more than 14,500 green affordable homes in over 350 developments. We have trained 4,000-plus housing professionals and helped more than 20 states and cities implement greener housing policies including HUD through the NOFA for Public Housing Agencies.

Enterprise's vision through Green Communities is for all affordable housing in the United States to be environmentally sustainable. Based on our experience and remarkable momentum across the country, we believe that goal is achievable in the near term. Grassroots housing organizations, in partnership with financial institutions, foundations, mayors and governors, are showing it is possible. Federal leadership can take this progress to scale. The ARRA bill made a great down payment on many of these efforts, investing more than $18 billion in various federal programs at both the Department of Housing and Urban Development (HUD) and the Department of Energy (DOE) to green residential and commercial buildings. Despite and because of that investment, it is time for a national commitment to make green and affordable one and the same.

The GREEN Act represents a major step towards that goal. We commend Representative Perlmutter for his vision and leadership in introducing the bill and for his hard work and steadfast commitment which resulted in passage of the GREEN Act last year as part of the Comprehensive American Energy Security and Consumer Protection Act. The GREEN Act is a sweeping proposal with many provisions that would have substantial positive impacts in the housing market, especially the affordable housing sector. Overall, Enterprise enthusiastically supports the bill. We believe it would be an even stronger proposal with some modifications, which we reference in the balance of our testimony.

In the letter inviting Enterprise to testify, the Committee asked us to discuss several issues in a number of questions. The central issues at the heart of the Committee's questions are:

- How will the GREEN Act improve the energy efficiency of single- and multi-family housing units?
- In what ways will the GREEN Act encourage the use of energy efficient and location efficient mortgages?
- What are the benefits of energy efficient improvements on low-income housing developments and low-income residents?

The Case for a National Commitment to Green Affordable Homes:
The Impact on Low-Income Communities and Communities of Color

Before addressing these issues, I believe it is important to establish context for my responses, specifically to frame the reasons why greening affordable housing should be a national priority. What follows is a summary of an Enterprise publication entitled *Bringing Home the Benefits of Energy Efficiency to Low-Income Households*, which I have included with our testimony. The

publication makes a comprehensive case for a national commitment to green affordable homes and lays out a 10-point policy platform for federal leadership.

There are roughly 29 million households with annual incomes of $25,000 or less in this country.[v] This income level is generally in line with the federal housing policy definition of "very low-income." It is approximately equivalent to 50 percent of the national median income and 150 percent of the federal poverty level for a family of three. According to the Center on Budget and Policy Priorities, only 4.9 million low-income families – about one of four eligible households – receive federal rental assistance through Section 8 vouchers, project-based rental assistance and public housing.[vi] For these families and individuals, and many more with higher incomes, the daily realities of housing challenges, rising energy and transportation costs and the impacts of climate change are interconnected.

Very low-income people are much more likely to live in less efficient buildings, which exacerbates the affordability problems millions face. Very low-income owners may only be able to afford homes that need energy upgrades to begin with and may have less income with which to make energy improvements. The Harvard University Joint Center for Housing Studies has reported:

> While low-income households will, out of necessity, replace furnaces or appliances that break, they will not usually install insulation or other more costly measures because they lack the money to do so. Instead, they often take simpler and less effective steps such as putting plastic on windows in the winter and using towels to stop drafts from doors and windows.[vii]

Low-income renters typically can afford only modest monthly payments, which constrains the ability of building owners to make building improvements. And more than half of low-cost, privately owned rental stock was built at least 30 years ago. According to Harvard University's Joint Center for Housing Studies, "much of [the inventory] is owned by individuals without the skill and resources to manage the properties profitably. And when their rental units cannot generate enough revenue to cover basic operating costs, these owners have little choice but to cut back on maintenance and repairs."[viii]

Meanwhile, according to the Bureau of Labor Statistics, energy costs have increased much faster than incomes for very low-income households in recent years, rising 68.6 percent since 1999.[ix] Families participating in the Low Income Home Energy Assistance Program (LIHEAP) spend 16.0 percent of their annual income on home energy bills – 4.4 times more than the level of non-eligible families.[x]

Not surprisingly, high utility bills force many very-low income households to make desperate tradeoffs between heat or electricity and other basic necessities. 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.[xi]

Enterprise

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.[xii] 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 National Housing Conference Center for Housing Policy found that transportation costs are also rising, especially for very low-income families. NHC also found that families earning $20,000 to $50,000 spend nearly half their incomes on housing and transportation costs combined. Again, families face brutal tradeoffs. According to the report:

> "Drive 'til you qualify" is an option used by many Working Families seeking affordable housing by moving to far-flung suburbs. Others, by necessity, live in inner city or inner-suburban locations where affordable housing is located, but access to suburban jobs is limited. But for many Working Families their effort to save on housing expenses leads to higher transportation costs—and an even larger portion of their budget consumed by both items.[xiii]

Climate change also imposes direct daily burdens for low-income people and minority communities. A report from the Congressional Black Caucus Foundation found that African-Americans are "disproportionately burdened by the health effects of climate change," including increased deaths from heat waves and extreme weather, as well as air pollution and the spread of infectious diseases. African-Americans will also bear the brunt of unemployment and economic hardship exacerbated by climate change, according to the report, even though they emit 20 percent less carbon dioxide than whites. The report concluded: "Stark disparities exist in the United States between those who benefit from the causes of climate change and those who bear the costs of climate change."[xiv]

Yet proposed approaches to tackle climate change by capping carbon emissions would have deleterious effects on low-income people. The Congressional Budget Office (CBO) has determined that:

> Regardless how the [carbon emissions] allowances were distributed, most of the cost of meeting a cap on CO_2 emissions would be bourne by consumers, who would face persistently higher costs for products such as electricity and gasoline. Those price increases would be regressive in that poorer households would bear a larger burden relative to their income than wealthier households would. [xv]

CBO noted that climate change policies that had only the "modest" effect of reducing emissions by 15 percent would impose an estimated $750-$950 a year in added costs, on average, on families in the bottom 20 percent of the income spectrum, those with average incomes of approximately $13,000.[xvi] By far the highest share of these higher costs – 45 percent – would come from more expensive home energy, according to the Center on Budget and Policy Priorities.[xvii]

Enterprise™

It should be noted that a national commitment to bring home the benefits of green development to low-income families would need to be phased in over time. Greening all affordable homes would require long-term commitment for practical as well as budgetary reasons. Conditions vary widely across the affordable inventory. There is a huge need to scale up the delivery system – contractors, energy auditors and local government staff – to implement a major national effort. And investments in green affordable homes must go hand-in-hand with strategies to encourage smarter land use and transportation.

In summary, housing, environmental and transportation challenges are inextricably linked and mutually reinforcing for millions of very low-income households. We can make progress on all these issues simultaneously and lock in long-term benefits by making an investment in greening affordable homes. But we need to think and act with more imagination and boldness than we have before. There is no more time for small-scale solutions and incremental progress.

Green Homes Deliver Multiple Benefits to Low-Income Communities and Communities of Color: Cost Savings, Health Benefits, Employment Opportunities

Cost Savings

The impact of increasing energy efficiency and making other improvements in the performance of affordable housing would create significant cost savings, health benefits and employment opportunities. Enterprise's experience through the Green Communities program 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 in many cases. These savings either accrue directly to low-income residents, or are reinvested back into properties by building owners, or both.

This is consistent with other research on improving energy efficiency in very low-income homes. 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.[xviii]

For multifamily apartment owners, more energy efficient buildings may generate higher and more stable cash flow from rents. To the extent energy improvements were part of more holistic green building rehabilitations, rental properties may be more durable and higher performing and potentially more valuable assets to own over the long term. Renters themselves stand to benefit, as noted above.

A study of the costs and benefits of green very low-income housing by New Ecology and the Tellus Institute concluded: "For residents of affordable housing units, the life-cycle financial outcome [of energy and healthy home upgrades] is almost always positive."[xix] The same study found that:

> In virtually all the cases, energy and water utility costs are lower than their conventional counterparts. In many cases, decreased operating expenditures alone more than pay for the incremental initial investment in greening the project in present value terms.
>
> The use of more durable materials and equipment in several of the case study projects result in reduced replacement costs and provide additional life-cycle financial benefits. Moreover, the value of improved comfort and health for residents, as well as reduced environmental impacts, is substantial, although not captured quantitatively in our analyses.[xx]

Health Benefits

In addition, studies of home weatherization and retrofit programs have catalogued an "array of benefits beyond energy savings," including greater comfort, convenience, health, safety and noise reduction. These "non-energy benefits" have been broadly estimated to be worth 50 percent-300 percent of annual household energy bill savings.[xxi] There is also emerging evidence that green homes are healthier.

There is a growing body of research that shows how the built environment can have "profound, directly measurable" physical and mental health outcomes. "Studies have shown that negative aspects of the built environment tend to interact with and magnify health disparities, compounding already distressing conditions… particularly adding to the burden of illness among ethnic minority populations and low-income communities."[xxii] 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.

Housing conditions have long been seen as important factors influencing health. According to David E. Jacobs, research director at the National Center for Healthy Housing and former director of the Department of Housing and Urban Development's Office of Healthy Homes and Lead Hazard Control:

> The physical structure of housing, together with the social and psychological aspects of home and the surrounding neighborhood are related to many key determinants of health…Specific housing hazards include exposure to allergens that may cause or worsen asthma, lead-based paint hazards, mold and excess moisture, unintentional injury, pesticides, indoor air quality and others.[xxiii]

Green design and building practices can create healthier home environments through better indoor air quality and healthier building materials. Sustainable developers are still learning which practices have the most positive health outcomes. As Jacobs notes:

> There is new evidence that housing interventions are indeed effective in reducing the onset and severity of asthma [and] there is similar evidence for other health

> outcomes…[although] considerably more research is needed to understand which interventions hold the greatest promise.[xxiv]

The bottom line, according to Rebecca Morley, executive director of the National Center for Healthy Housing:

> It is clear that we can expect substantial health gains by building green. 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.[xxv]

Smarter site planning and development that creates a sense of community, encourages walking and provides access to parks and mass transit is also healthier. Research suggests that people who live in sprawling areas walk less, weigh more and are more likely to suffer from high blood pressure.[xxvi]

A recently completed study on a Hope VI green affordable housing project developed by the Seattle Public Housing authority monitored 60 rental homes occupied by families who suffer from asthma or other respiratory illnesses. These "Breathe-Easy" homes were designed to minimize residents' symptoms and improve their health. For the entire group of residents living in Breathe-Easy homes, the number of emergency room or urgent doctor visits declined by two-thirds. In their old homes, which often contained many of the triggers for asthma symptoms, children experienced an average of 7.6 symptom-free days every two weeks. After living in their Breathe-Easy Homes, they were symptom-free 12.4 days out of every 14. By this measure, children with asthma experienced a 65 percent increase in symptom-free days. The caretakers of asthma sufferers also reported an increase in their quality of life. These preliminary findings suggest that modest improvement in housing design, materials and construction (approximately $6,000 per unit) dramatically reduced asthma triggers, symptoms and incidence rates. [xxvii]

Employment Opportunities

Investment in increasing energy efficiency in very low-income homes would generate significant economic activity in the construction industries and other sectors that have been hard hit by the economic downturn. According to the Bureau of Labor Statistics, residential construction employment – the component of the construction sector most directly affected by the housing slump – fell 31.4 percent since the peak in April 2006, for a total loss of 321,500 jobs.[xxviii] Smart federal investments can help this critical industry to our economy bounce back more quickly.

Energy efficiency and broader green home rehabilitation and new construction can be an especially promising basis for creating good "green collar" jobs for low-income people. A recent study identified 22 different job sectors of the U.S economy that currently provide workers with green collar jobs, of which 11 were directly (not to say exclusively) related to green home rehabilitation, including several specifically tied to energy efficiency.[xxix]

Enterprise™

The condition of many homes and apartments where our lowest income citizens live creates opportunities for significant energy savings and other environmental improvements through cost-effective rehabilitation measures. These approaches – insulation, chimney and roof repairs; caulking and sealing; window replacements; installation of energy-efficient equipment; and systems and building testing – offer good paying jobs for which low-income workers could be trained and employed.

Increased investment in green very low-income home rehabilitation could create these jobs at scale. One study of a residential retrofit initiative in Germany showed than 140,000 jobs were saved or created in retrofitting 200,000 homes.[xxx] The Department of Energy (DOE) estimates that every $1 million invested in weatherization programs creates 52 low-income community jobs.[xxxi]

Of course, not all construction jobs on green very low-income developments could fairly be characterized as "green jobs" absent an intentional effort to provide training in the aspects of the work that were more energy efficient and environmentally responsible. Even without such an explicit commitment, green home rehabilitation and construction "does have the potential to create entry level job opportunities for low-income and people of color when cities implement a combination of policies that promote green building, job training and labor standards."[xxxii]

Green jobs associated with very low-income housing can be created outside construction as well in the areas of home energy audits, inspections and building performance testing. And as innovation and public policies accelerate market penetration of renewable energy technologies, opportunities should emerge to create more green economy jobs, and deliver the energy and environmental benefits of clean energy, to low-income people through energy efficient home construction and rehabilitation.

The Need for Additional Resources

The GREEN Act would provide new federal resources for green affordable development primarily through loans (Section 14) and a block grant (Section 16). These funds generally would support hard 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 18).

It is not clear precisely how much direct federal investment the GREEN Act would authorize. To frame for the Committee the potential scope of a national commitment to green affordable housing, Enterprise projects that a federal commitment of $5 billion a year over 10 years could deliver huge benefits across the board: 25 percent-40 percent energy savings in up to 25 million residential units, up to 50 million tons of carbon dioxide emissions avoided and hundreds of thousands of green jobs created annually when fully implemented.

Such a federal commitment is relatively modest when one considers that the U.S. Department of Housing and Urban Development (HUD) currently pays more than $4 billion annually in utility

bills in often inefficient government-assisted properties that constitute a fraction of the homes and apartments that could benefit.

Federal funding is a relatively small part of the equation in our vision of the transformation within our grasp in 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 at this formative stage. The GREEN Act recognizes this and would facilitate it by providing Fannie Mae and Freddie Mac extra credit towards their annual affordable housing finance obligations for funding mortgages that incentivize energy efficiency (Section 6). This would stimulate innovation among key actors in the housing finance system and work within the current statutory and regulatory framework for covered institutions.

Conclusion

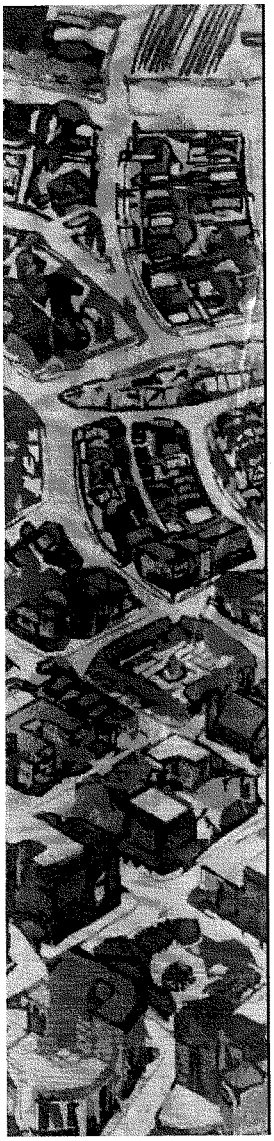
Several factors suggest the time is now to mainstream energy efficiency in very low-income housing. Worsening housing, environmental and transportation needs and growing public awareness of climate change is driving energy investment and innovations among a wide range of industries, including housing and construction, of which very low-income housing is an important sub-sector. Green building practices emphasizing energy efficiency are becoming more widespread among very low-income housing providers, due in large part to stimulus funds directed towards these programs and ideals. State and local policymakers are also starting to take serious action on climate and energy issues, opening opportunities to create policies and public-private partnerships.

Now is the time for federal leadership. The federal government has an important role to play in accelerating the transformation of affordable housing and bringing home the benefits of the emerging green economy to low-income families and communities. The GREEN Act would be a groundbreaking step in the right direction. We look forward to working with the Committee to pass this bill this year.

Enterprise

[i] "Income, Energy Efficiency and Emissions: The Critical Relationship," Energy Programs Consortium (February 26, 2008).
[ii] Ibid.
[iii] Ibid.
[iv] Dan W. Reicher, Director, Climate Change and Energy Initiatives, Google.org. Testimony given before the Senate Committee on Finance (February 27, 2007).
[v] U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, Table 1. Income Distribution Measures, by Definition of Income: 2007.
[vi] Douglas Rice and Barbara Sard, "Decade of Neglect Has Weakened Federal Low-Income Housing Programs," Center on Budget and Policy Priorities (February 25, 2009).
[vii] "America's Rental Housing: Homes for a Diverse Nation," Joint Center for Housing Studies of Harvard University (2006).
[viii] Ibid.
[ix] Bureau of Labor Statistics, Consumer Price Index for All Urban Customers: Energy (CPIENGSL) (April 1999 and 2009).
[x] U.S. Department of Health and Human Services, "LIHEAP Home Energy Notebook For Fiscal Year 2007," Table A-3b. (June, 2009).
[xi] "2005 National Energy Assistance Survey," National Energy Assistance Directors' Association (September 2005).
[xii] Ernie Hood, "Dwelling Disparities: How Poor Housing Leads to Poor Health" *Environmental Health Perspectives*, May 2005.
[xiii] Barbara J. Lipman, "A Heavy Load: The Combined Housing and Transportation Burdens of Working Families," National Housing Conference Center for Housing Policy (October, 2006).
[xiv] "African Americans and Climate Change: An Unequal Burden," Congressional Black Caucus Foundation (July 21, 2004).
[xv] "Trade-Offs in Allocating Allowances for CO2 Emissions," Congressional Budget Office (April 25, 2007).
[xvi] Ibid.
[xvii] Robert Greenstein, Sharon Parrott and Arloc Sherman, "Designing Climate Change Legislation that Shields Low-Income Households From Increased Poverty and Hardship," Center on Budget and Policy Priorities (November 8, 2007).
[xviii] See www.energystar.gov/index.cfm?c=new_homes.nh_benefits.
[xix] William Bradshaw et al., "The Costs & Benefits of Green Affordable Housing," New Ecology and the Tellus Institute (2005).
[xx] Ibid.
[xxi] 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).
[xxii] Ernie Hood, "Dwelling Disparities: How Poor Housing Leads to Poor Health" *Environmental Health Perspectives*, May 2005.
[xxiii] Jacobs, D.E., "Housing and Health: Challenges and Opportunities," Keynote Address, Proceedings of the 2nd WHO International Housing and Health Symposium, WHO European Centre for Environment and Health (Bonn Office), Noise and Housing Unit, Bonn Germany, September 29 - October 1, 2004, (Vilnius Lithuania, October 20, 2005), 25.
[xxiv] Ibid, 41.
[xxv] Statement of Rebecca Morley, MSPP, Executive Director, National Center for Healthy Housing Before the Environmental Public Works Committee United States Senate (May 15, 2006).
[xxvi] Barbara McCann and Reid Ewing, *Measuring the Health Effects of Sprawl: A National Analysis of Physical Activity, Obesity and Chronic Disease*, (Washington, D.C.: Smart Growth American and Surface Transportation Policy Project), 2003.
[xxvii] T.K. Takaro, MD, MPH, et., al., "Clinical Response in Asthma From Improved Housing Design and Construction," presentation at US Green Building Council's Greenbuild Conference (November 2007).
[xxviii] Bureau of Labor Statistics. Employment, Hours, and Earnings from the Current Employment Statistics Survey (National). Series ID: CES2023610001.

[xxix]Raquel Pinderhughes, Ph.D., "Green Collar Jobs: An Analysis of the Capacity of Green Businesses to Provide High Quality Jobs for Men and Women with Barriers to Employment," City of Berkeley Office of Energy and Sustainable Development (2007).
[xxx] *Green Jobs: Towards Sustainable Work in a Low-Carbon World*, Worldwatch Institute (2008).
[xxxi] "Weatherization Assistance Program: Improving the Economies for Low-Income Communities," U.S. Department of Energy (August 2006).
[xxxii] "Community Jobs in the Green Economy," Apollo Alliance and Urban Habitat (2007).



Testimony of:

Mr. Edward Mazria
Founder and Executive Director
2030, Inc. / Architecture 2030

Mailing Address:
607 Cerrillos Road, Suite G
Santa Fe, NM 87505

Before the U.S. House of Representatives
House Financial Services Subcommittee
on Housing and Community Opportunity
Self-Sustaining, Market-Based Jobs vs. "Handouts"

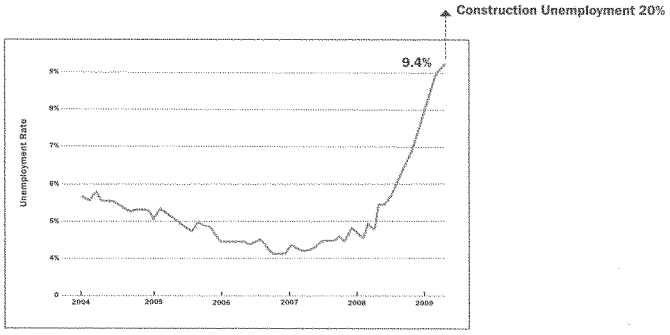
Thursday, June 11, 2009, 2:00 p.m.
Room 2128 of the Rayburn House Office Building

architecture 2030

Madam Chairwoman and Members of the House Financial Services Subcommittee on Housing and Community Opportunity, thank you for the opportunity to comment on the "GREEN Act of 2009" as it relates to the critical issue of housing and jobs in the United States.

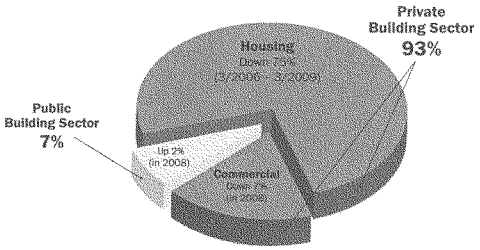
Background

The country continues to struggle with a deep economic recession as unemployment inches toward double digits. Construction unemployment is currently at 20%, more than double the national average. Over the past eight months, construction jobs have been evaporating at an astonishing 111,000 jobs per month with over 1.7 million construction workers now unemployed.



U.S. Unemployment (2004 – 2009)
Source: U.S. Bureau of Labor Statistics

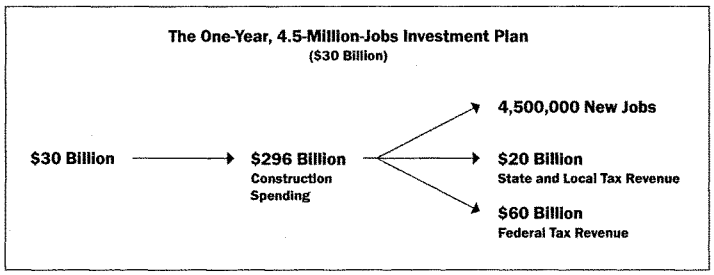
In March 2009, construction of residential buildings was down 48% from March 2008, 66% from March 2007, and a staggering 75% from March 2006 with no relief in sight. The average annual income for residential construction workers is $35,500, so rampant unemployment in this sector is devastating for families and communities across the US.



U.S. Building Construction
Source: U.S. Bureau of the Census, Construction Reports

Plan Summary

Because the private building sector represents 93% of total U.S. building stock, this sector is key to reviving the U.S. economy. Allocating $30 billion of stimulus dollars to the private building sector to provide a 'housing mortgage interest rate buy-down' for homes that meet or exceed the initial energy reduction target of the widely adopted 2030 Challenge will create 4.5 million new jobs and $296 billion in direct, non-federal investment and spending. It would also open up a new $47.6 billion renovation market that could grow to $1 trillion by 2030. Through the new tax base created, the Plan returns to the federal government twice its investment annually while generating 66% of its investment in tax revenue for local governments.



Plan Rationale

Although important, public infrastructure and building projects cannot solve the U.S. economic crisis:

- The public building sector accounts for just 7% of total U.S. building stock.
- Compared to private building, public infrastructure and building generate very little private investment and spending.
- Public Infrastructure and building projects are dependent on strong local and federal tax revenues, which are now in decline.
- Because these projects cannot produce a sustainable tax base, the federal government will have to continue to provide funding for each new project.

The private building sector, on the other hand, is key to solving this crisis:

- The private building sector accounts for 93% of total U.S. building stock and impacts the entire U.S. economy. Building construction alone accounts for approximately 10% of the U.S. GDP.
- Over 1.7 million construction workers are now unemployed, and every sector of the U.S. economy (from wholesale, retail, distribution, manufacturing and construction to professional services, banking and development) and every industry (from steel, rubber, insulation and caulking to mechanical and electrical equipment, glass, wood, metals, tile, fabrics and paint) is reeling from the effects.
- Investing in the private building sector generates demand for construction services and products, and private investment and spending, on a much larger scale than public infrastructure and building projects, creating millions of more jobs.
- The large tax base generated from the new jobs, private investment and spending, and new renovation market will both pay for the Plan each year it is in effect and provide the needed funding for future public infrastructure and building projects.

The Plan and Its Benefits

The Plan requires those participating in the housing mortgage interest rate buy-down to renovate (or build new) to specific energy reduction targets. This requirement is central to the Plan, immediately creating demand for Building Sector services and products, including $47.6 billion of building renovation. It is this demand within the private building sector that generates $296 billion in private investment and spending, and it is this $296 billion in private investment and spending that makes the 4.5 million new jobs possible. Without this additional investment and spending, the number of jobs created would be far less.

Only 2.3% of total U.S. housing stock would need to participate in the One-Year, 4.5-Million-Jobs Investment Plan to create these massive economic benefits. If demand for these construction services is also generated in the remaining 97.7% of the residential sector, either through market forces or continuation of the Plan over a period of years, the demand created could help fuel our economy for the next 40 to 50 years.

In addition, during the year the Plan is in effect, consumers will save a minimum of $11.7 billion in energy costs and mortgage payments, significantly reducing the risk of mortgage failure while increasing disposable income. With only 2.3% of the U.S. housing stock participating, at a minimum, the Plan will reduce CO_2 emissions by 11.5 MMT CO2e and on-site energy consumption by 104 TBtu. All of these benefits continue in perpetuity, so that over five years, consumers will save a minimum of $58.6 billion in energy costs and mortgage payments, and at a minimum, CO_2 emissions will be reduced by 57.6 MMT CO_2e and on-site energy consumption by 518 TBtu.

If the Plan is expanded to include 20% of the housing stock, at a minimum, it would reduce on-site energy consumption by 907 TBtu, as well as save consumers a minimum of $103 billion in energy costs and mortgage payments annually. Again, these benefits continue in perpetuity, so over 5 years, consumers will save a minimum of $514 billion in energy costs and mortgage payments.

Conclusion

Addressing the collapse of the private building sector is critical to stabilizing the U.S. economy. The Plan addresses this, as well as many other challenges facing the country, including energy independence and climate change. With a single investment, the U.S. can create millions of jobs, strengthen the U.S. economy, reduce CO_2 emissions and energy consumption, and save consumers billions of dollars. Investing in the private building sector is the only investment that can accomplish all of these objectives.

The One-Year, 4.5-Million-Jobs Investment Plan

Architecture 2030

A SIDE-BY-SIDE COMPARISON

HOMEOWNER SAVINGS	WITH PLAN	WITHOUT PLAN
Mortgage Payment	$1,054	$1, 439
Mortgage Savings	$385	$0
Energy Savings	$158	$0
Total Monthly Savings	**$543**	**$0**

JOBS & TAX REVENUE	WITH PLAN	WITHOUT PLAN
Government Spending	$30 billion	$30 billion
Private Spending Generated	**$296 billion**	negligible
Jobs Created	**4,500,000**	339,060
State and LG Taxes Collected	**$20 billion**	$2 billion
Federal Taxes Collected	**$60 billion**	$6 billion

The One-Year, 4.5-Million-Jobs Investment Plan

Architecture 2030

Plan Summary

Because the private building sector represents 93% of total U.S. building stock[1], and building construction alone accounts for approximately 10% of the U.S. GDP[2], the private building sector is the key to reviving the U.S. economy. Investing $30 billion in the private building sector to provide a 'housing mortgage interest rate buy-down' for homes that meet or exceed the initial energy reduction target of the widely adopted 2030 Challenge[3] will create **4.5 million new jobs** and **$296 billion in direct, non-federal investment and spending** while opening up a new **$47.6 billion renovation market** that could grow to $1 trillion by 2030. This Plan **returns to the federal government twice its investment annually** through the new tax base created and can be implemented quickly through existing federal programs (see How Quickly Can Investment Begin below).

Basis for Private Building Sector Focus

Although important, infrastructure and the public building sector cannot solve the U.S. economic crisis:

- The public building sector accounts for only 7% of total U.S. building stock.[4]
- Public infrastructure and building are not currently in decline.[5]
- Compared to private building, public infrastructure and building generate very little private investment and spending.
- Public infrastructure and building projects are dependent on strong tax revenues, which are now in decline.
- Because these projects cannot produce a sustainable tax base, the federal government will have to continue to provide funding for each new project.

The private building sector, on the other hand, is key to solving this crisis:

- The private building sector accounts for 93% of total U.S. building stock and impacts the entire U.S. economy. Building construction alone accounts for approximately 10% of the U.S. GDP.
- In March 2009, construction of residential buildings was down 48% from March 2008, 66% from March 2007, and a staggering 75% from March 2006 with no relief in sight.[6]
- Over 1.7 million construction workers are now unemployed[7], and every sector of the U.S. economy (from wholesale, retail, distribution, manufacturing, and construction to professional services, banking, and development) and every industry (from steel, rubber, insulation and caulking to mechanical and electrical equipment, glass, wood, metals, tile, fabrics, and paint) is reeling from the effects.
- Investing in the private building sector generates demand for construction services and products, and private investment and spending, on a much larger scale than public infrastructure and building projects, creating millions of more jobs.
- The large tax base generated from the new jobs, private investment and spending, and new renovation market will both pay for the Plan each year it is in effect *and* provide the needed funding for future public infrastructure and building projects.

---

[1] 2007 Buildings Energy Data Book, Energy Information Administration, Tables 2.1.1, 2.2.1 and 2.2.3.

[2] 2007 Buildings Energy Data Book, Energy Information Administration, Table 4.5.1.

[3] The 2030 Challenge, issued by Architecture 2030, calls for all new buildings and renovations to be designed so as to reduce their fossil-fuel, greenhouse-gas-emitting energy consumption by 30% below that required by the latest IECC 2006 and ASHRAE 90.1-2004 code standards, incrementally increasing the reductions to carbon neutral by 2030.

[4] 2007 Buildings Energy Data Book, Energy Information Administration, Tables 2.1.1, 2.2.1 and 2.2.3.

[5] McGraw Hill Construction report, December 18, 2008. From January through November 2008, construction of infrastructure projects grew by 2%. Construction of institutional buildings grew by 6%, helped by public and government buildings (up 6%) and educational buildings and schools (up 6%).

[6] Economics Department NAHB (www.HousingEconomics.com): U.S. Bureau of the Census, Construction Reports, Series C-20. Housing Starts.

[7] U.S. Department of Labor, Bureau of Labor Statistics, Economic News Release, Employment Situation Summary, http://www.bls.gov/news.release/empsit.nr0.htm.

Plan Specifics

The Plan requires those participating in the housing mortgage interest rate buy-down to renovate (or build new) to specific energy reduction targets. This requirement is central to the Plan, immediately creating demand for Building Sector services and products, including $47.6 billion of building renovation. It is this demand within the private building sector that generates $296 billion in private investment and spending, and it is this $296 billion in private investment and spending that makes the 4.5 million new jobs possible. **Without this additional investment and spending, the number of jobs created would be far less.**

Only 2.3% of total U.S. housing stock would need to participate in the One-Year, 4.5-Million-Jobs Investment Plan to create these massive economic benefits. If demand for these construction services is also generated in the remaining 97.7% of the residential sector, either through market forces or continuation of the Plan every year, the demand created could help fuel the economy for the next 40 to 50 years.

In addition, during the year the Plan is in effect, consumers will save a minimum of $11.7 billion in energy costs and mortgage payments, significantly reducing the risk of mortgage failure while increasing disposable income. With only 2.3% of the U.S. housing stock participating, at a minimum, the Plan will reduce CO_2 emissions by 11.5 MMT CO_2e and on-site energy consumption by 104 TBtu. All of these benefits continue in perpetuity, so that over five years, consumers will save a minimum of $58.6 billion in energy costs and mortgage payments, and at a minimum, CO_2 emissions will be reduced by 57.6 MMT CO_2e and on-site energy consumption by 518 TBtu.

If the Plan is expanded to include 20% of the housing stock, at a minimum, it would reduce CO_2 emissions by 101 MMT CO_2e and on-site energy consumption by 907 TBtu, as well as save consumers a minimum of $103 billion in energy costs and mortgage payments annually. Again, these benefits continue in perpetuity, so over 5 years, consumers will save a minimum of $514 billion in energy costs and mortgage payments, and at a minimum, CO_2 emissions will be reduced by 505 MMT CO_2e and on-site energy consumption by 4.5 QBtu.

Residential Buildings

Plan benefits are weighted to encourage renovation in the current 'overbuilt' environment; however, the Plan also offers benefits for new buildings that meet the targets to further encourage an immediate and rapid shift to an energy-efficient built environment.

The Plan leverages the benefits of energy reductions by offering for both existing and new homes, through Fannie Mae, Freddie Mac and other GSEs, increased mortgage financing with reduced interest rates in relation to the energy reduction target reached:

A. Those seeking to purchase an existing home, refinance their mortgage (including to avoid foreclosure), or purchase a newly constructed home that qualifies for a 'location efficient mortgage'[8] could choose to reduce their qualifying mortgage rate by 1.0% or more, if the home meets or is renovated to meet one of the corresponding energy reduction targets provided below.

% Below Qualifying Mortgage Rate[9]	Minimum Energy Reduction Target (Energy Savings)[10]
1.0%	HERS 70 (30% below IECC 2006)[11]
1.5%	HERS 50 (50% below IECC 2006)
2.0%	HERS 25 (75% below IECC 2006)
2.5%	Net zero[12]

[8] The definition of a 'location efficient mortgage' can be found in the proposed Green Act of 2009 (H.R. 2336).

[9] Depending on market conditions, the interest rates made available under the Plan can either float with the market rate, as illustrated in the chart, or be fixed (such as, 4.0% for HERS 70, 3.5% for HERS 50, 3.0% for HERS 25, and 2.5% for net zero). The cost of the Plan may vary, depending on the approach chosen.

[10] Building energy consumption from non-depletable energy sources collected on site or provided from within a development is considered an energy savings.

[11] Equivalent rating systems may be used. See 'Meeting the 2030 Challenge Through Building Codes' at www.architecture2030.org/news/multimedia.html.

[12] A net-zero energy building produces at least as much emissions-free renewable energy as it uses from emissions-producing energy sources.

To qualify for one of the percentage buy-downs listed in the chart above, the homeowner must both i) meet the minimum HERS rating and ii) invest a minimum amount in energy efficiency and/or renewable energy systems (which is added into the new mortgage). The minimum amount required to be invested is dependent on the amount of the new mortgage as illustrated in the following tables:

1.0% Buy-down/HERS 70:

New Mortgage Amount	**$150,000**	**$200,000**	**$250,000**	**$300,000**	**$350,000**	**$400,000**
Minimum Homeowner Investment	$12,000	$16,000	$20,000	$24,000	$28,000	$32,000

1.5% Buy-down/HERS 50:

New Mortgage Amount	**$150,000**	**$200,000**	**$250,000**	**$300,000**	**$350,000**	**$400,000**
Minimum Homeowner Investment	$18,000	$24,000	$30,000	$36,000	$42,000	$48,000

2.0% Buy-down/HERS 25:

New Mortgage Amount	**$150,000**	**$200,000**	**$250,000**	**$300,000**	**$350,000**	**$400,000**
Minimum Homeowner Investment	$24,000	$32,000	$40,000	$48,000	$56,000	$64,000

2.5% Buy-down/HERS 0:

New Mortgage Amount	**$150,000**	**$200,000**	**$250,000**	**$300,000**	**$350,000**	**$400,000**
Minimum Homeowner Investment	$30,000	$40,000	$50,000	$60,000	$70,000	$80,000

For example, a homeowner with a $240,000 mortgage at an interest rate of 6% would have a monthly mortgage payment of $1,439. Having paid in $30,000 in equity, his mortgage balance is currently $210,000. The homeowner qualifies for a 5% mortgage interest rate and wishes to take advantage of the 2.0% buy-down rate for a new rate of 3%. To **refinance his mortgage at 3.0%**, he will need to **renovate his home to use 75% less energy** than that required by code, **spending a minimum of $40,000 on efficiency measures**. The cost of the renovation would be **added into the new mortgage**, so that the new mortgage is now $250,000. However, because of the significantly lower interest rate, i.e. 3.0%, the new mortgage payment is just $1,054, a savings of $385 per month. With the additional monthly savings on energy bills of approximately $158[13], this homeowner would **save a total of $543 per month**.

[13] Anderson, R., "Example Performance Targets and Efficiency Packages, Greensburg, Kansas (Presentation)," National Renewable Energy Laboratory (NREL). Assumes a 75% reduction below codes is the average between 50% below and net zero energy. 2030 adjusted for renovation using relationship between percentage below code and percentage below existing energy use, based on 'Meeting the 2030 Challenge Through Building Codes' (see www.architecture2030.org/news/multimedia.html).

B. Those seeking a reduced-rate, 30-year mortgage to purchase a newly constructed home could choose to reduce their qualifying mortgage rate by 0.5% or more, if the home meet one of the corresponding energy reduction targets provided below:

% Below Qualifying Mortgage Rate[14]	Minimum Energy Reduction Target (Energy Savings)[15]
0.5%	HERS 70 (30% below IECC 2006)[16]
1.0%	HERS 50 (50% below IECC 2006)
1.5%	HERS 25 (75% below IECC 2006)
2.0%	Net zero[17]

Job Creation Results

The total number of new jobs created by the Plan is estimated as follows:

Building Sector	Indirect & Induced	TOTAL NEW JOBS
1,377,363	3,122,637	4,500,000

NOTE: Does not include an additional, minimum 130,530 jobs created by consumer spending of mortgage and energy savings.

Because of the effectiveness of energy efficiency, any economic stimulus and job-creation plan should require all Building Sector programs receiving federal funds, including public building projects (e.g. government, education and community facilities) to meet the 2030 Challenge targets.

To support the Plan, Architecture 2030 recommends funding State Energy Departments for the specific purpose of compliance training of building inspectors and others to verify that the buildings meet the energy reduction specifications. Other organizations have submitted proposals recommending funding for training. Architecture 2030 supports these proposals.[18]

Cost

$30 billion per year, based on an average cost of a 1.0% mortgage rate buy-down being 4 points (or 4.0% of the mortgage amount). The Plan will return to the federal government twice this amount in new tax revenue each year through the new tax base created by the 4.5 million new jobs, as well as the increased economic activity. In addition, the Plan will save the government the cost of unemployment benefits. Because the Plan returns twice the federal government's investment annually through the new tax base created, Architecture 2030 recommends that the Plan be implemented for at least three years or until the recession ends.

How Quickly Investment Can Begin

Ninety to 180 days. This Plan can be implemented through existing federal programs, such as Fannie Mae and Freddie Mac. The Secretary of the Treasury can carry out the Plan using the authority made available under the Housing and Economic Recovery Act of 2008.

For immediate implementation, Architecture 2030 has made available a version of this national plan for state and local governments to use as their Energy Efficiency and Conservation Strategy for the Energy Efficiency and Conversation Block

[14] Depending on market conditions, the interest rates made available under the Plan can either float with the market rate, as illustrated in the chart, or be fixed (such as, 4.5% for HERS 70, 4.0% for HERS 50, 3.5% for HERS 25, and 3.0% for net zero). The cost of the Plan may vary, depending on the approach chosen.

[15] Building energy consumption from non-depletable energy sources collected on site or provided from within a development is considered an energy savings.

[16] Equivalent rating systems may be used. See 'Meeting the 2030 Challenge Through Building Codes' at www.architecture2030.org/news/multimedia.html.

[17] A net-zero energy building produces at least as much emissions-free renewable energy as it uses from emissions-producing energy sources.

[18] The 4.5 million jobs created by this Plan does not include the jobs that will be created by the investment in compliance training.

Grants. Titled the *14x Stimulus* plan, the plan leverages each $1 of government money spent on the program to generate $14 of private spending, create 14 times the number of jobs, generate $3 in new taxes for the federal government, and return $1 in new tax revenues back to state and local government coffers.

Number of Jobs Produced

4.5 million (1.4 million direct jobs in the Building Sector, as well as an additional 3.1 million indirect and induced jobs. The 4.5 million jobs does not include an additional 130,530 jobs created by consumer spending of mortgage and energy savings.)

Plan Justification

Numerous studies have shown that investing in energy reductions in buildings is the most effective way to create American jobs and revitalize the economy. Energy reductions can be implemented immediately, creates the most jobs, costs the least and offers great benefits to the planet.[19] By integrating energy reduction requirements with a mortgage buy-down, we can leverage the effectiveness of these reductions to keep families in their homes and revive the economy.

The Building Sector has taken the brunt of the economic downturn with over 1.7 million construction workers out of work. A well-thought-out, strategic investment in this sector would revitalize it, and due to the large number of products and services involved, spread the investment across the entire U.S. and across all industries (from steel, insulation and caulking to mechanical and electrical equipment, glass, wood, metals, tile, fabrics and paint) and all sectors (from architecture, planning, design, engineering, banking and development to manufacturing, construction, wholesale, retail and distribution).

One of the greatest benefits of the Plan is the potential to create a whole new renovation market for the construction industry, which would immediately get this vital industry back to work and potentially provide work for the next 40 to 50 years. As noted above, in the first year alone, homeowners renovating their homes to meet or exceed the initial 2030 Challenge target will create a renovation market worth over $47.6 billion.[20] This market has the potential to reach $1 trillion by 2030.[21] As impressive as these numbers are, they are conservative because they assume each building is renovated only once and they do not take into account that many participants will complete additional renovations while doing the required energy-reduction renovations to take advantage of the reduced, one-time mortgage rate afforded under the Plan. It is important to note, however, that this market is only created if the mortgage rate buy-down requires participants to meet the energy reduction targets.

Unlike other plans, this Plan moves the U.S. toward significant energy and emissions reductions. The Building Sector is responsible for approximately half of all energy consumption and GHG emissions in the U.S. annually. An investment of $30 billion in the Plan would not only create jobs and save consumers money, it would also, over a five-year period, reduce at a minimum, CO_2 emissions by 57.6 MMT CO_2e and on-site energy consumption by 518 TBtu, including 163 billion cu. ft. of natural gas and almost one million barrels of oil, thereby addressing climate change and energy independence as well.

Another important benefit is that the Plan pays for itself *and* provides funding for public infrastructure and building projects through the large tax base generated from the new jobs, private investment and spending, and new renovation market. This ability to pay for itself provides the opportunity to continue the Plan for as long as needed or desired. For instance, there is 192 billion square feet of existing housing stock in the U.S. To encourage renovation of this existing stock, so as to achieve the necessary energy and GHG reductions called for by the scientific community to address climate change, the Plan could be continued until energy reduction goals are achieved or other mechanisms are in place.

Finally, a significant benefit of building performance standards is that they do not pick clean-energy technology winners or losers. Any existing or new non-CO_2-emitting technology or planning and design strategy can be employed to meet a standard.

[19] Kershner, K. and Mazria, E., "The 2030 Blueprint: Solving Climate Change Saves Billions," 2030, Inc. / Architecture 2030, http://www.architecture2030.org/pdfs/2030Blueprint.pdf.

[20] For financial analysis, contact Architecture 2030.

[21] The total amount of the building renovation market available after the initial one-year Plan period assumes that the same level of renovation intensity will continue due either to continuation of the Plan, market forces, other incentives and/or improved building codes to drive additional energy reductions in the Building Sector.

This includes everything from increasing neighborhood density, building orientation and color, daylighting, appropriate materials, passive solar heating, and cooling and natural ventilation strategies, to insulation, high-performance glazing, solar hot water heating, photovoltaics, micro-wind turbines, energy management systems, daylighting controls and any other site, development or community-scale clean-energy source or strategy.

Conclusion

Addressing the collapse of the private building sector is critical to stabilizing the U.S. economy. The Plan addresses this, as well as many other challenges facing the country, including energy independence and climate change. With a single investment, the U.S. can create millions of jobs, strengthen the U.S. economy, reduce CO_2 emissions and energy consumption, and save consumers billions of dollars. **Investing in the private building sector is the only investment that can accomplish all of these objectives.**

Contacts:

Edward Mazria
Executive Director
2030, Inc. / Architecture 2030
505.988.5309
mazria@architecture2030.org

Kristina Kershner
Director
2030, Inc. / Architecture 2030
505.988.5309
kershner@architecture2030.org

LENNAR®

Testimony of

Mr. Roy Willis
Executive Vice President, Lennar Urban

Before the

Congress of the United States
House Financial Services Committee
Subcommittee on Housing and Community Opportunity

Hearing on

The Green Resources for Energy Efficient Neighborhoods (GREEN) Act of 2009
H.R. 2336

June 11, 2009

Chairwoman Waters, Ranking Member Capito, and Members of the Subcommittee:

My name is Roy Willis and I am the Executive Vice President of Southern California Division of Lennar Urban, a part of Lennar Corporation, one of the nation's largest homebuilders.

On behalf of Lennar and its partners in the renewable energy and financial sectors, I sincerely appreciate the opportunity to testify this afternoon. In many ways, this hearing and the questions you sent me touch on some of the most important aspects of my life's work: housing, support for low- and moderate-income families, and urban redevelopment.

Whether it was working for the Urban Reinvestment Corporation in the 1970's to bring capital to blighted areas, or helping to execute the Watts and South Los Angeles Renaissance Program after the civil disturbances of 1992, I have tried to do my part to make life better for low- and moderate-income citizens....and I believe the next generation of this work must extend to protecting our environment.

To that end, I would like to focus my comments in this limited time on two areas:

- First, I would like to discuss Section 27 of the Bill, the renewable energy leasing provision, and
- Second, directly respond to your questions of how this section of the Bill would affect low- and moderate-income households and communities.

As we all know, it takes green to go green and, in today's trying economic times, many simply cannot afford the upfront cost of buying assets like solar panels to put on their roofs---even with the current level of federal and state incentives.

At the same time, private investment, both debt and equity, will not support the leasing of renewable energy assets because, among other things, there is no market clarity regarding what those assets are worth over time. The result is a delay in the adoption of these clean technologies when we need them most. In short, we need to make going green more affordable, especially for low- and middle-income families.

Section 27 can help fix this. By establishing a loan insurance program, paid for entirely by user fees, H.R. 2336 would help set a baseline for what renewable energy systems are worth, and therefore lay the foundation for private investment in renewable energy system leases. The result would be transformational. Renewable energy systems would become affordable. Clean technology investment would resume. Companies would sell more. Thousands of jobs would be created. And our environment would benefit --- all at no cost to the taxpayer.

To put it in perspective, if half the homes built in America annually in normalized times – about 500,000 in a non-recession year – included solar energy systems, for example, that would mean:

- Saving the equivalent of 6.6 billion barrels of oil annually;
- Reducing carbon emissions by the same amount as removing 440,000 cars from the road; and
- Producing the energy of three new nuclear power plants.

Chairwoman Waters, with your permission, I would like to submit for the record a more detailed analysis of how renewable leasing would work and an analysis we commissioned by former Congressional Budget Office Director Douglas Holtz-Eakin to analyze the budget impact of the proposed program where he concluded, and this is a direct quote, this "will not be a budget buster."

Chairwoman Waters, you also asked, in your written questions to the witnesses earlier this week, for us to comment on what effect "green" development would have on low and moderate income households and communities.

While the benefits I described would apply to everyone, they should have a pronounced positive impact in the communities you ask about for two principle reasons:

Leasing makes the enjoyment of capital intensive assets affordable. Leasing has been successfully used in other industries.

Second, with unemployment at double-digit levels in much of the country, and low-income people particularly feeling the impact of the recession, the increased demand for residential renewable energy systems would help to create new, green, clean-tech jobs. The Million Solar Roof Initiative estimates that placing solar energy systems on one million homes would create 70,000 jobs.

Chairwoman Waters, thank you again for the opportunities to share our views on this important piece of legislation. I look forward to answering your questions and to working with you and the committee.

Renewable Leasing:
Lowering Up-Front Cost of Renewable Energy Devices, Spurring Private Investment, and Protecting Taxpayers

FEBRUARY 2009

Executive Summary

- Widespread consumer adoption of renewable energy devices depends on minimizing the up-front cost of acquiring a system through consumer financing.
- Leasing provides such a financing mechanism, but is only possible when a market-accepted value of the asset is available.
- The federal government can establish that value through a loan insurance program.
    - The value of the asset can be calculated objectively using the expected energy production for the duration of the asset's useful life.
    - The federal insurance can be financed by the repossessed device's ongoing energy output and through fees paid into a fund.

- A solar photo-voltaic (PV) lease program, for example, would work as follows:

    - **The home owner:** elects to enter a "PV lease" for 10 years or less with a third party lessor, and grants that third party an easement: access to and use of the roof of the home, including use of the PV energy produced by the unit if the home owner does not renew his or her lease for the life of the system.
    - **The PV panel manufacturer and system installer**: guarantees a minimum amount of energy production each year over the life of the product, in this case 25 years.
    - **The third party lessor**: a private capital investor funds most or all of the upfront cost of the PV system, taking all existing state or federal economic incentives to deploy renewable energy, and any loans they enter to finance the cost of the system are insured by the federal government after a 5 year waiting period: a loan in the amount of the value of the asset 5 years into the lease term would be insured by the federal government. The lessor retains responsibility for service and maintenance of the PV system.
    - **The federal government**: insures loans made to finance renewable energy systems 5 years after the lease commences and uses the anticipated energy production, as warranteed by the PV panel manufacturer for each year, from that point in time to the end of the product life (25 years) to establish the residual value of the asset, which sets the amount insured. That insurance would, in effect, stabilize residual values and, in turn, the entire financing equation.
- The benefits to Americans of half a million new PV energy systems, for example, would be the equivalent of about three new nuclear power plants and over 440,000 cars taken off the road.
- Even if the maximum taxpayer exposure were assumed, with no energy revenue or user fees paid to the federal government, the total dollar exposure would be approximately $12,000 to $17,000 per unit. The program, however, could be managed to avoid any taxpayer cost exposure.

INTRODUCTION

Residential housing, both new construction and retrofitted units, can be a significant deployment channel for energy conservation and renewable energy systems. The technology and production capacity exist today to put these improvements into the nation's homes immediately. The problem, however, is the high up-front cost to the consumer of purchasing and installing energy-saving features. If a consumer could pay little or nothing up front, with only a monthly payment for a renewable energy system, and such monthly payments were less than that consumer's current utility bills, we would witness a massive expansion in the adoption of residential renewable energy systems in the U.S.

Congress can help to make this a reality by providing the necessary loan insurance, at minimal exposure to the taxpayer, to establish the private financing of renewable leases. Specifically, Congress can establish a federal loan insurance program that will insure the value of a renewable energy asset. This assurance will induce private capital to support the leasing of PV and other renewable energy systems, harnessing private capital markets to (i) **lower** the upfront costs of renewable energy infrastructure; (ii) **create** new green-related jobs; (iii) **spur** the flow of private capital to critical renewable energy assets; and (iv) **reduce** our nation's dependence on foreign sources of energy while improving the environment.

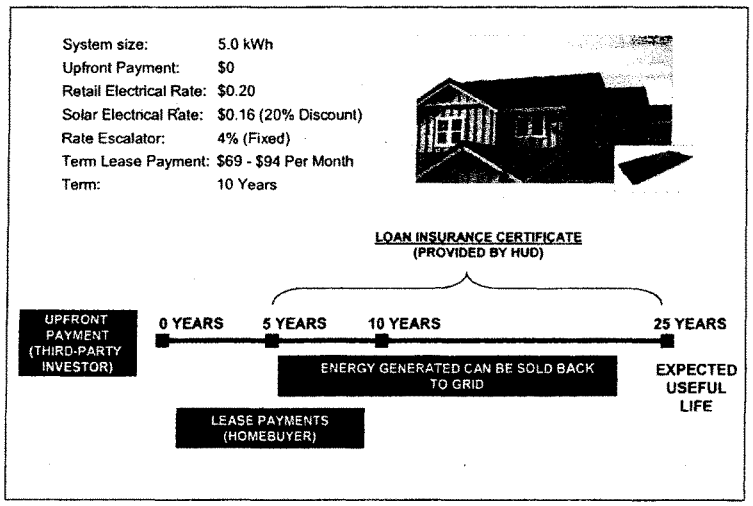
THE OPPORTUNITY: RENEWABLE ENERGY LEASING

Data show that widespread adoption of renewable energy systems, like solar PV systems, is limited primarily by the high upfront costs of such products. While many financing mechanisms are available to bridge this affordability gap, including the use of mortgage financing, creating a program that requires consumers to put little, if any, money down and make payments over time in exchange for immediate savings in retail energy rates will accelerate adoption. This is most clearly manifested in a "PV lease."

WHAT IS A PV LEASE?

PV leasing involves a third party paying all or most of the upfront cost of the PV energy infrastructure and leasing the full use and enjoyment back to the consumer, at costs below available retail energy prices, over a long period of time (e.g., up to 10 years). In turn, the lessee grants to that third party the right to install and operate the PV energy system on the roof and grants an easement to access such equipment. This type of transaction involves investors (i) availing themselves of current federal, state and local tax credits, grants, or other financial incentives to offset their initial investment; (ii) collecting lease payments over time from homeowners; and (iii) selling or refinancing the subject asset, as the case may be, at the market-recognized value.

The key to the success of the PV lease is point (iii), above: establishing a widely accepted residual value of the asset which, today, is non-existent. In the case of a renewable energy asset, the value can be established based upon both the energy that the device will produce in its remaining useful life (based upon a production guarantee from the subject PV manufacturer and widely available forecasts of expected electricity prices).



HOW CAN WE STABILIZE "RESIDUAL VALUES"?

Unlike automobile and home leasing, where the residual value can be quite subjective, the residual value of PV and other renewable energy assets can be objectively established as the discounted value of the system's expected future energy production. The problem today, however, is that there is not yet an established secondary market to value the residual renewable energy production. Congress can help change that.

A government program, much like many loan guarantee programs, can be created to insure the residual value of renewable energy assets, using those assets' future energy production as an objective valuation yardstick. In this instance, the government would insure loan financing in the event of default or abandonment. The future production of the system then can be used to pay off such loan if these events occur. Thus, in the worst case scenario, if the government were to pay an insurance claim, the energy revenue from the asset would revert to the government itself, posing little taxpayer exposure. In addition, the program would be supported by an initial fee (up to 3% of the principal amount insured) that the investor would pay for the loan insurance.

PROGRAM SPECIFICS

The following illustration of a PV lease demonstrates how the program would work, although it could be applied to any form of renewable energy device:

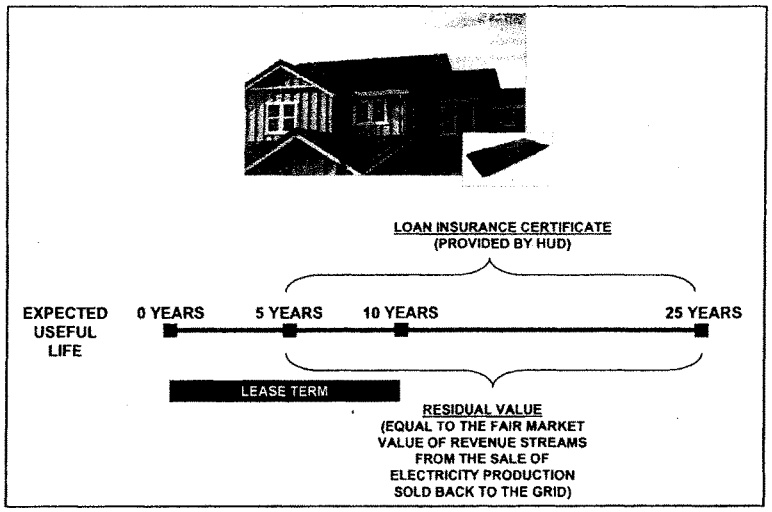
1. **The home owner**. Either when purchasing a new home or upgrading an existing home, the home owner elects to enter a "PV lease." The term of the lease is 10 years or less. The home owner enters an agreement with a third party lessor and grants that third party an easement: access to and use of the roof of the home, including use of the PV energy produced by the unit if the home owner does not renew his or her lease. The home owner makes monthly lease payments to the third party that are less than what the home owner's utility bills would have been. At the end of the lease term, the home owner may (a) purchase the PV energy system; (b) renew the lease for an additional term; or (c) stop using the PV energy system, with the energy from the system going back to "the grid" and

the revenues from that energy accruing to the third party lessor or lender, as the case may be.

2. **The PV panel manufacturer and system installer**. In selling the PV device to the third party lessor, the PV manufacturer guarantees a minimum amount of energy production per year over the life of the product, in this case 25 years. In some instances, the PV panel manufacturer may also be the system installer.

3. **The third party lessor**. Private capital investments will fund most or all of the upfront cost of PV, taking all existing state or federal economic incentives to deploy renewable energy (making their investment returns more palatable to investors). The third party lessor's loan to fund the investment in the PV lease would be the subject of the federal government's insurance beginning after 5 years: insurance in the amount of the value of the asset each year during the life of the system beginning with the fifth year would be insured by the federal government. The third party lessor would retain responsibility for service and maintenance.

4. **The federal government**. The Department of Housing and Urban Development would insure loans made for renewable energy systems. In this example, the government entity would use the anticipated energy production, based on the PV panel manufacturer's warranty and government forecasts of electricity prices, for each year beginning with the fifth year of the lease term to the end of the product life (25 years) to establish the residual value of the asset for each year. Insurance in that amount for each year would, in effect, stabilize residual values and , in turn, the entire financing equation.



This program will:

- Pose no cost to the taxpayer during the first 5 years of the lease term;
- Give investors and lenders the confidence to make large upfront investments today based upon a very structured and certain cash flow (lease payment and residual revenue stream or "take out" loan) in the future; and
- Protect taxpayers and lenders by relying on the origination fee and future production of the system to cover any government administrative costs or insurance claims.

BENEFITS

By spurring adoption of residential renewable energy systems, the proposed program would accelerate the adoption of PV energy systems above current growth projections. The energy savings to consumers would be significant. In a typical non-recession year, over 1 million new homes are built and purchased annually. If half those homes had renewable energy devices financed by little or no up-front cost leases, consumers would save almost 3.4 billion kWh/year in energy, the equivalent of about 6.6 million barrels of oil. The environment would benefit from over 2.4 million fewer metric tons of carbon dioxide in the atmosphere, the equivalent of over 440,000 fewer cars on the road.

Utilities would benefit by not having to construct the equivalent of about 3 new nuclear power plants.

PV EQUIVALENCY STUDY[a]

Number of Homes	kWh/year generated	Metric tons of CO2e	Barrels of Oil	Cars	Acres of Trees	Nuclear Plants
1	6,750	4.82	13.27	0.88	2.04	0.00
100	675,000	482	1,327	88	204	0.00
5,000	33,750,000	24,111	66,333	4,416	10,217	0.03
500,000	3,375,000,000	2,411,136	6,633,283	441,600	1,021,668	2.59

The taxpayer benefits by having a self-funded program that does not rely on general revenues, yet produces tangible benefits to the nation, including significant job creation and its resulting tax revenue.

RISKS

The federal government would take on limited risk in establishing the renewable energy loan insurance program. For example, there may be some minimal level of defaults on the underlying loans being insured. Leased equipment may be abandoned in foreclosure or other scenarios. In such cases, the federal government's insurance costs would be covered by (a) energy revenues from the system itself for the system's remaining useful life; (b) user fees paid by insured investors; or (c) some combination of the two. The program would pose no significant risk to taxpayers, thanks to these revenues. Moreover, the federal government's insurance typically would come into effect only at the end of the first 5 years.

Even in light of these risk-mitigating factors, however, the maximum exposure to the taxpayer of the loan insurance program can be established as follows:

- A 5.0 kWh PV energy system on a new home typically costs $35,000, while on a retrofitted home it costs $50,000.

[a] Based on 5.0 kWh photovoltaic system per home, annual production = 1,350 kWh. Emission factors from eGRID 2007 Version 1.0 (U.S. average values). Site to source conversion factor = 3.34. IPCC Global Warming Potential Values used. Source: ConSol Energy 2008.

- The residual value of such systems after five years, which is the value underwritten by the insurance program, would be $12,000 to $17,000.
    - This value is the net present value ("NPV") of the energy produced in the remaining life of the asset (years 6 through 25).[b]
- The expected future production of such systems would be well above the total value of the repossessed assets. In addition, the up to 3% fee paid by investors to obtain the insurance would also be available to cover any costs of the program or insurance claims.

[b] Energy values are from publicly available Department of Energy (EIA) national estimates. The productivity of the Solar PV systems are assumed to be 0.5% annually. NPV here is based on a discount rate of 6%.

CONCLUSION

Widespread consumer adoption of renewable energy devices depends on minimizing the up-front cost of acquiring a system through consumer financing. Leasing provides such a financing mechanism, but is only possible with a market-accepted value of the asset. The federal government can establish that value through a loan insurance program. The value of the asset could be calculated objectively using the expected energy production for the duration of the asset's useful life. The federal insurance could be financed by the repossessed device's ongoing energy output or through lessees' fees paid into a fund. The benefits to Americans of half a million new PV energy systems, for example, would be the equivalent of about three new nuclear power plants and over 400,000 cars taken off the road. Even if the maximum taxpayer exposure were assumed, with no energy revenues or user fees paid into the federal government, the total dollar exposure for each unit after five years would be $12,000 to $17,000. The program, however, would be managed to avoid any taxpayer exposure.

DHE Consulting, LLC
901 North Pollard Street, #1807
Arlington, VA 22203

April 30, 2009

David Kaiserman, President
Lennar Ventures
700 NW 107th Avenue
Suite 400
Miami, FL 33172

Dear David:

Thank you for the opportunity to analyze the budgetary impacts of a federal insurance program for loans for financing of renewable energy systems leased for residential use. Having looked at the draft specifications, I believe it is safe to say that this should not be a budget-busting program.

The most important budgetary feature of the program is the fact that premiums are collected at the time loans are insured, while any budgetary outlay is deferred for five years after that. The current Congressional budget resolution is a 5-year window covering 2010-14. As a result, if premiums are levied at all, this program will be a net surplus and source of revenues in the current budget window.

Over the longer term, the net fiscal implications will depend on the extent to which premiums are charged on an actuarially-fair basis that reflects accurate information on experienced and expected default rates. A more complete description of the budgetary and sensitivity analysis is attached.

This analysis highlights two aspects of the program as currently drafted. First, it would be possible to draft the program with the requirement that in be implemented on a zero-subsidy basis. If written that way, the Office of Management and Budget would be obligated to ensure that premiums are set on an actuarially-appropriate basis.

Second, the draft shows all insurance payments subject to annual appropriation, thereby raising the possibility that any year-to-year surplus may be appropriated for other purposes, and undercutting the overall balance in the program. Again, it would be possible to draft stronger protections that ensure premiums are used only to liquidate insurance obligations.

Finally, especially with consideration of the two drafting options, I think the analysis strongly supports the notion that this program should be evaluated on its policy merits. If one wishes to move to a cleaner energy portfolio and seeks to provide federal leadership in financial products that support this portfolio, this program offers as way to do so in a responsible budgetary manner.

Sincerely,

Douglas Holtz-Eakin
President, DHE Consulting LLC

Framework for the Scoring Analysis

DHE Consulting, LLC built a basic national economic, housing, and energy outlook for 2010 to 2044 that consisted of the following variables (and their sources):

- Treasury Interest Rate (CBO, year-to-year smoothing by DHE)
- CPI Inflation (CBO – also smoothed)
- Residential Electricity Prices ($per KWH from EIA)
- Housing Starts (Based on Macroeconomic Advisers, LLC Long-Term Projection)
- Stock of Owner Occupied Homes (DHE Consulting, LLC)

These projections allow one to compute the KWH per system (assuming productivity growth of 0.5 percent annually), the residual value per energy system (assuming CBO inflation, CBO interest rates, and a manufacturer's warranty of 95 percent of the rated output), and the loan value per insured unit.

Assumptions regarding the takeup rates for new homes and existing homes are combined with the housing starts and existing homes projections, respectively, to determine the total number of loans issued and insured. As a rough starting point, wI chose takeup rates of 10 percent and 0.5 percent respectively. Because the stock of housing is so large relative to new construction, the latter number is the most important for determining the scale of the program.

The key variable is the difference between the default rate on loans and the rate of insurance premiums charged. We assumed as a rough benchmark that the default rate on new construction would reflect the overall default rate on first mortgages of single-family homes. The basic argument is that we are drawing from the same pool of homeowners. Given market conditions, we have this starting at 7 percent and declining to 2 percent at the end of the budget window.

Finally, as a benchmark, we set the premiums at a common value of 1.5 percent of the loan amount. This reflects a rough-justice assessment that historically premiums have been below the actuarially-fair level in federal programs.

Preliminary Scores

See Table 1. Obviously, the key bottom line is that there is an annual surplus for the startup of the program – a feature that will be robust to any of the key assumptions because of the design. Over the long-haul, the program as we have assumed implemented runs a deficit, but that is easily fixed with actuarial premiums.

Sensitivity Analysis

A sensitivity analysis is in Tables 2 and 3. Table 2 looks at how much the default rate can exceed the premium rate and still have the program break even over the 10-year budget window. Because the premiums build up over the initial five years, the default rate can exceed the premium rate by over 2 percentage points and still break oven.

In contrast, Table 3 looks at the more stringent test of having the program break even over the final 5 years, 2015-2019. This precludes using the build up of premiums to help the budget picture. The result is that the default rate can exceed the premium rate by only 0.55 percentage points and have the program roughly break even.

Table 1

Fiscal Years

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
New Homes											
	Loans Insured	76,200	125,525	152,400	184,500	214,400	220,300	208,200	190,950	174,125	161,075
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333
	Premium per Insured	$ 197.14	$ 201.83	$ 208.28	$ 214.96	$ 221.84	$ 228.92	$ 236.24	$ 243.87	$ 251.80	$ 259.99
	Default Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
	Total Defaults	5,334	8,286	9,311	10,346	10,961	10,190	8,603	6,239	3,949	3,222
	Value of Defaulted Loans	$ 70,101,607	$ 111,494,630	$ 129,285,407	$ 148,260,650	$ 162,112,198	$ 155,522,046	$ 135,487,991	$ 101,436,325	$ 66,286,652	$ 55,838,240
	Premium Income	15,021,773	25,372,641	31,772,824	39,702,825	47,599,658	50,430,018	49,163,040	46,540,584	43,820,101	41,860,259
	Insurance Outlays	-	-	-	-	23,367,202	99,518,272	121,562,479	138,284,312	156,308,829	161,854,289
	Insurance Fund Surplus (deficit)	18,988,238	31,697,687	39,022,228	47,944,528	33,127,174	(40,654,629)	(65,101,934)	(86,304,849)	(108,943,043)	(116,999,313)
	Insurance Fund Balance	18,988,238	50,685,925	89,708,153	137,652,682	170,779,856	130,125,227	65,023,293	(21,281,556)	(130,224,599)	(247,223,912)
	Value of Electricity Sales	$ 3,966,465	$ 6,325,046	$ 7,249,404	$ 8,241,704	$ 8,894,718	$ 8,433,625	$ 7,297,506	$ 5,438,879	$ 3,545,685	$ 2,994,716
Existing Homes											
	Loans Insured	322,500	435,006	442,626	451,851	462,571	473,586	483,996	493,544	502,250	510,304
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333
	Premium per Insured	$ 197.14	$ 201.83	$ 208.28	$ 214.96	$ 221.84	$ 228.92	$ 236.24	$ 243.87	$ 251.80	$ 259.99
	Default Rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
	Total Defaults	1,613	2,175	2,213	2,259	2,313	2,368	2,420	2,468	2,511	2,552
	Value of Defaulted Loans	$ 21,192,134	$ 29,266,310	$ 30,730,256	$ 32,376,073	$ 34,205,764	$ 36,138,563	$ 38,112,654	$ 40,119,617	$ 42,155,708	$ 44,225,459
	Premium Income	63,576,401	87,806,769	92,200,453	97,140,402	102,631,697	108,430,395	114,352,081	120,372,341	126,479,888	132,688,614
	Insurance Outlays	-	-	-	-	7,064,045	28,593,760	29,982,165	31,532,807	33,272,720	35,167,481
	Insurance Fund Surplus (deficit)	64,775,487	89,465,259	93,923,197	98,939,463	97,444,339	81,797,439	86,424,937	90,995,760	95,469,562	99,894,302
	Insurance Fund Balance	64,775,487	154,240,746	248,163,943	347,103,407	444,547,746	526,345,185	612,770,122	703,765,882	799,235,444	899,129,746
	Value of Electricity Sales	1,199,086	1,658,490	1,722,745	1,799,062	1,876,687	1,960,804	2,055,020	2,156,227	2,262,394	2,373,169
Insurance Program											
	Loans Insured	398,700	560,531	595,026	636,351	676,971	693,886	692,196	684,494	676,375	671,379
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333
	Premium per Insured	$ 197	$ 202	$ 208	$ 215	$ 222	$ 229	$ 236	$ 244	$ 252	$ 260
	Default Rate	1.7%	1.9%	1.9%	2.0%	2.0%	1.8%	1.6%	1.3%	1.0%	0.9%
	Total Defaults	6,947	10,461	11,524	12,605	13,274	12,558	11,023	8,707	6,460	5,773
	Value of Defaulted Loans	$ 91,293,740	$ 140,760,940	$ 160,015,663	$ 180,636,723	$ 196,317,962	$ 191,660,609	$ 173,600,644	$ 141,555,942	$ 108,442,360	$ 100,063,699
	Premium Income	78,598,174	113,179,411	123,973,277	136,843,226	150,231,355	158,860,413	163,515,121	166,912,925	170,299,988	174,548,873
	Electricity Sales	5,165,552	7,983,536	8,972,149	10,040,766	10,771,405	10,394,429	9,352,526	7,595,105	5,808,079	5,367,885
	Insurance Outlays	-	-	-	-	30,431,247	128,112,032	151,544,644	169,817,119	189,581,548	197,021,769
	Insurance Fund Surplus (deficit)	83,763,725	121,162,946	132,945,425	146,883,992	130,571,513	41,142,810	21,323,003	4,690,911	(13,473,481)	(17,105,011)
	Insurance Fund Balance	83,763,725	204,926,672	337,872,097	484,756,089	615,327,602	656,470,412	677,793,415	682,484,326	669,010,845	651,905,834

Table 2

Fiscal Years

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2014	2015-2019	2010-2019
New Homes														
	Loans Insured	76,200	125,525	152,400	184,500	214,400	220,300	208,200	190,950	174,125	161,075			
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333			
	Premium per Insured	$ 197.14	$ 201.83	$ 208.28	$ 214.96	$ 221.84	$ 228.92	$ 236.24	$ 243.87	$ 251.80	$ 259.99			
	Default Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%			
	Total Defaults	2,724	4,488	5,448	6,596	7,665	7,876	7,443	6,826	6,225	5,758			
	Value of Defaulted Loans	$ 35,801,892	$ 60,382,174	$ 75,651,932	$ 94,521,605	$ 113,357,820	$ 120,196,643	$ 117,223,305	$ 110,983,094	$ 104,496,951	$ 99,810,854			
	Premium Income	15,021,773	25,372,641	31,772,824	39,702,825	47,599,658	50,430,018	49,163,040	46,540,584	43,820,101	41,860,259			
	Insurance Outlays	-	-	-	-	11,933,964	51,981,058	68,386,186	84,471,524	104,283,175	118,748,641			
	Insurance Fund Surplus (deficit)	17,047,503	28,799,475	36,015,828	44,959,150	41,887,160	4,969,788	(12,905,495)	(31,969,798)	(54,858,592)	(71,535,327)			
	Insurance Fund Balance	17,047,503	45,846,978	81,862,806	126,821,956	168,709,116	173,678,904	160,773,409	128,803,611	73,945,020	2,409,693			
	Value of Electricity Sales	$ 2,025,731	$ 3,426,833	$ 4,243,003	$ 5,256,325	$ 6,221,466	$ 6,520,828	$ 6,317,651	$ 5,961,142	$ 5,604,482	$ 5,353,055			
Existing Homes														
	Loans Insured	322,500	435,006	442,626	451,851	462,571	473,586	483,996	493,544	502,250	510,304			
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333			
	Premium per Insured	$ 197.14	$ 201.83	$ 208.28	$ 214.96	$ 221.84	$ 228.92	$ 236.24	$ 243.87	$ 251.80	$ 259.99			
	Default Rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%			
	Total Defaults	11,529	15,551	15,824	16,154	16,537	16,931	17,303	17,644	17,955	18,243			
	Value of Defaulted Loans	$ 151,523,756	$ 209,254,117	$ 219,721,332	$ 231,488,919	$ 244,571,215	$ 258,390,728	$ 272,505,475	$ 286,855,263	$ 301,413,316	$ 316,212,033			
	Premium Income	63,576,401	87,806,769	92,200,453	97,140,402	102,631,697	108,430,395	114,352,081	120,372,341	126,479,888	132,688,614			
	Insurance Outlays	-	-	-	-	50,507,919	204,445,383	214,372,477	225,459,572	237,899,948	251,447,486			
	Insurance Fund Surplus (deficit)	72,149,867	99,664,970	104,518,077	110,003,694	65,542,088	(81,995,240)	(85,327,003)	(89,670,212)	(95,243,943)	(101,790,714)			
	Insurance Fund Balance	72,149,867	171,814,837	276,332,914	386,336,608	451,878,696	369,883,455	284,556,452	194,886,241	99,642,298	(2,148,416)			
	Value of Electricity Sales	8,573,466	11,858,201	12,317,624	12,863,292	13,418,310	14,019,747	14,693,392	15,417,020	16,176,117	16,968,159			
Insurance Program														
	Loans Insured	398,700	560,531	595,026	636,351	676,971	693,886	692,196	684,494	676,375	671,379			
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333			
	Premium per Insured	$ 197	$ 202	$ 208	$ 215	$ 222	$ 229	$ 236	$ 244	$ 252	$ 260			
	Default Rate	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%			
	Total Defaults	14,254	20,039	21,272	22,750	24,202	24,806	24,746	24,471	24,180	24,002			
	Value of Defaulted Loans	$ 187,325,648	$ 269,636,291	$ 295,373,264	$ 326,010,525	$ 357,929,034	$ 378,587,371	$ 389,728,779	$ 397,838,357	$ 405,910,266	$ 416,022,887			
	Premium Income	78,598,174	113,179,411	123,973,277	136,843,226	150,231,355	158,860,413	163,515,121	166,912,925	170,299,988	174,548,873	602,825,442	834,137,321	1,436,962,764
	Electricity Sales	10,599,196	15,285,034	16,560,628	18,119,618	19,639,776	20,540,576	21,011,044	21,378,162	21,780,600	22,321,214	80,204,252	107,031,595	187,235,846
	Insurance Outlays	-	-	-	-	62,441,883	256,426,441	282,758,663	309,931,096	342,183,122	370,196,128	62,441,883	1,561,495,450	1,623,937,333
	Insurance Fund Surplus (deficit)	89,197,370	128,464,445	140,533,905	154,962,844	107,429,248	(77,025,452)	(98,232,498)	(121,640,010)	(150,102,534)	(173,326,041)	620,587,812	(620,326,534)	261,277
	Insurance Fund Balance	89,197,370	217,661,815	358,195,719	513,158,564	620,587,812	543,562,360	445,329,862	323,689,852	173,587,318	261,277			
	Differential between Premium Rate and Default Rate	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%			

Table 3

Fiscal Years

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2014	2015-2019	2010-2019
New Homes														
	Loans Insured	76,200	125,525	152,400	184,500	214,400	220,300	208,200	190,950	174,125	161,075			
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333			
	Premium per Insured	$ 197.14	$ 201.83	$ 208.28	$ 214.96	$ 221.84	$ 228.92	$ 236.24	$ 243.87	$ 251.80	$ 259.99			
	Default Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%			
	Total Defaults	1,562	2,574	3,125	3,783	4,396	4,517	4,269	3,915	3,570	3,303			
	Value of Defaulted Loans	$ 20,534,764	$ 34,633,188	$ 43,391,409	$ 54,214,420	$ 65,018,240	$ 68,940,760	$ 67,235,353	$ 63,656,178	$ 59,935,943	$ 57,248,156			
	Premium Income	15,021,773	25,372,641	31,772,824	39,702,825	47,599,658	50,430,018	49,163,040	46,540,584	43,820,101	41,860,259			
	Insurance Outlays	-	-	-	-	6,844,921	29,814,590	39,224,021	48,450,031	59,813,329	68,110,235			
	Insurance Fund Surplus (deficit)	16,183,664	27,338,158	34,206,468	42,717,677	44,323,161	24,355,556	13,562,612	1,509,664	(12,778,685)	(23,179,642)			
	Insurance Fund Balance	16,183,664	43,521,822	77,728,290	120,445,967	164,769,128	189,124,684	202,687,296	204,196,960	191,418,275	168,238,633			
	Value of Electricity Sales	$ 1,161,891	$ 1,965,517	$ 2,433,644	$ 3,014,852	$ 3,568,424	$ 3,740,128	$ 3,623,593	$ 3,419,111	$ 3,214,543	$ 3,070,333			
Existing Homes														
	Loans Insured	322,500	435,006	442,626	451,851	462,571	473,586	483,996	493,544	502,250	510,304			
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333			
	Premium per Insured	$ 197.14	$ 201.83	$ 208.28	$ 214.96	$ 221.84	$ 228.92	$ 236.24	$ 243.87	$ 251.80	$ 259.99			
	Default Rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%			
	Total Defaults	6,613	8,920	9,076	9,265	9,485	9,711	9,924	10,120	10,299	10,464			
	Value of Defaulted Loans	$ 86,908,940	$ 120,021,138	$ 126,024,781	$ 132,774,274	$ 140,277,839	$ 148,204,248	$ 156,299,993	$ 164,530,550	$ 172,880,560	$ 181,368,608			
	Premium Income	63,575,401	87,806,769	92,200,453	97,140,402	102,631,697	108,430,395	114,352,081	120,372,341	126,479,888	132,688,614			
	Insurance Outlays	-	-	-	-	28,969,647	117,263,009	122,956,857	129,316,043	136,451,425	144,221,838			
	Insurance Fund Surplus (deficit)	68,493,853	94,608,235	99,265,429	104,518,354	81,358,342	(791,357)	(177,139)	(101,017)	(693,459)	(1,800,858)			
	Insurance Fund Balance	68,493,853	163,102,088	262,367,517	366,885,871	448,244,213	447,452,856	447,275,717	447,174,700	446,481,241	444,680,383			
	Value of Electricity Sales	4,917,452	6,801,466	7,064,976	7,377,953	7,696,292	8,041,256	8,427,637	8,842,685	9,278,078	9,732,366			
Insurance Program														
	Loans Insured	398,700	560,531	595,026	636,351	676,971	693,886	692,196	684,494	676,375	671,379			
	Average Value Insured	$ 13,142	$ 13,456	$ 13,885	$ 14,330	$ 14,789	$ 15,262	$ 15,749	$ 16,258	$ 16,787	$ 17,333			
	Premium per Insured	$ 197	$ 202	$ 208	$ 215	$ 222	$ 229	$ 236	$ 244	$ 252	$ 260			
	Default Rate	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%			
	Total Defaults	8,175	11,494	12,201	13,048	13,881	14,228	14,193	14,036	13,869	13,767			
	Value of Defaulted Loans	$ 107,443,704	$ 154,654,326	$ 169,416,189	$ 186,988,694	$ 205,296,080	$ 217,145,008	$ 223,535,346	$ 228,186,728	$ 232,816,504	$ 238,616,763			
	Premium Income	78,598,174	113,179,411	123,973,277	136,843,226	150,231,355	158,860,413	163,515,121	166,912,925	170,299,988	174,548,873	602,825,442	834,137,321	1,436,962,764
	Electricity Sales	6,079,343	8,766,982	9,498,620	10,392,805	11,264,716	11,781,385	12,051,229	12,261,796	12,492,621	12,802,699	46,002,467	61,389,730	107,392,197
	Insurance Outlays	-	-	-	-	35,814,568	147,077,599	162,180,878	177,766,074	196,264,753	212,332,073	35,814,568	895,621,376	931,435,944
	Insurance Fund Surplus (deficit)	84,677,517	121,946,393	133,471,897	147,236,031	125,681,503	23,564,199	13,385,473	1,408,647	(13,472,144)	(24,980,500)	613,013,341	(94,325)	612,919,016
	Insurance Fund Balance	84,677,517	206,623,910	340,095,807	487,331,838	613,013,341	636,577,540	649,963,013	651,371,660	637,899,516	612,919,016			
	Differential between Premium Rate and Default Rate	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%			

NATIONAL ASSOCIATION OF REALTORS®

The Voice For Real Estate®

500 New Jersey Avenue, N.W.

Washington, DC 20001-2020

Charles McMillan
CIPS, GRI
President

Dale A. Stinton
CAE, CPA, CMA, RCE
EVP/CEO

GOVERNMENT AFFAIRS
Jerry Giovaniello, Senior Vice President
Gary Weaver, Vice President
Joe Ventrone, Vice President
Jamie Gregory, Deputy Chief Lobbyist

HEARING BEFORE THE

UNITED STATE HOUSE OF REPRESENTATIVES

COMMITTEE ON FINANCIAL SERVICES

SUBCOMMITTEE ON HOUSING AND COMMUNITY OPPORTUNITY

ENTITLED

"H.R. 2336, THE GREEN ACT OF 2009"

WRITTEN TESTIMONY OF

DAVID WLUKA, REALTOR®

ON BEHALF OF

THE NATIONAL ASSOCIATION OF REALTORS®

JUNE 11, 2009

REALTOR® is a registered collective membership mark which may be used only by real estate professionals who are members of the NATIONAL ASSOCIATION OF REALTORS® and subscribe to its strict Code of Ethics.

Introduction

Chairwoman Waters, Ranking Member Capito, and Members of the Subcommittee, thank you for the opportunity to testify before you. My name is David Wluka and I am a broker/owner of Wluka Real Estate Corp in Sharon, MA. I am the 2009 Chair of the National Association of REALTORS® (NAR) State and Local Issues Committee, and a member of the Global Climate Change Presidential Advisory Group. I am also an "Ecobroker Certified", a designation that predates NAR's new Green certification.

I am here to testify on behalf of 1.2 million members of the National Association of REALTORS®. We thank you for the opportunity to present our views on incentive based approaches to improving the energy efficiency of buildings. NAR represents a wide variety of housing industry professionals committed to the development and preservation of the nation's housing stock and making it available to the widest range of potential homebuyers.

Thank you for the opportunity to testify on H.R. 2336 (Perlmutter, D-CO), the Green Resources for Energy Efficient Neighborhoods (GREEN) Act to encourage energy efficiency in HUD housing by offering block grants and credit for energy improvements in the underwriting of mortgages. NAR policy is committed to efforts to advance consumer understanding of the need for energy efficiency and reduce energy use, and supports reasonable incentive-based approaches to improve that understanding. This bill would encourage energy efficiency by offering block grants and other financial incentives such as mortgages interest rate reductions for that purpose. For several years, NAR's membership and the association itself have taken a number of actions to address this commitment, including:

- Building the first LEED certified office building in Washington, D.C.;
- Developing extensive member training and education programs including a Green desgination for real estate professionals;

- Partnering with the U.S. Department of Energy on promoting its *Energy Savers* brochure to our members and their clients; and
- Sponsoring significant research on building related energy issues.

While we have some concerns with some of the specifics contained in the GREEN Act, the basic approach – to incentivize building efficiency through mortgages -- is sound. It is a far more workable approach than that taken by H.R. 2454's (Waxman, D-CA), the "American Clean Energy and Security Act" that will label older properties with energy scores and reduce property values. We would encourage the subcommittee to consider substituting a Perlmutter-based approach for the labeling provisions of HR 2454.

H.R. 2336, the GREEN Act of 2009

NAR supports the approach of HR 2336 to encourage energy efficiency and conservation in our nation's housing stock. The bill contains many incentive-based approaches for encouraging energy efficient building, rehabilitation and upgrades, and we are strongly supportive of those provisions. The bill also provides a loan fund for states to implement renewable energy projects. HR 2336 also provides for a number of demonstration and pilot programs in HUD housing, that should help provide best practices and great experiences for promoting energy efficiency in these properties.

Bill Provisions Requiring Further Clarification

While NAR supports the bill's approach and many provisions which are discussed in the next section of our remarks, we do have some concerns with certain provisions and question whether they would achieve desired objective of improving energy efficiency:

1. Definition of "HUD Assistance". The bill defines "HUD Assistance" as, "financial assistance that is awarded, competitively or noncompetitively, allocated by formula, or provided by HUD through loan insurance or guarantee". This definition would include the FHA single family mortgage insurance 203b program as a type of "HUD assistance". We do not agree with this characterization of FHA mortgage insurance, and are concerned with the precedent that would be set by associating insurance with a term has a very specific meaning related to subsidies. The FHA single-family mortgage insurance program is a mutual insurance fund whose participants fully fund the program. There is no subsidy or federal assistance provided – borrowers to the program pay premiums in return for mortgage insurance. The program has never needed a federal bailout or contribution and is fully self-funding. We strongly urge the Committee to change this definition and remove the 203b program from the definition of "assistance".

2. Sections 6 and 7 provide additional affordability goals credit and a new duty to establish a secondary market for energy mortgages for Fannie Mae and Freddie Mac, the government sponsored enterprises (GSEs). The current housing market crisis requires that the GSEs focus their efforts on helping at risk families stay in their homes and provide safe and affordable mortgages to homebuyers. This crisis has shown the very critical and necessary role the GSEs play in our mortgage markets. Unlike private secondary market investors, Fannie Mae and Freddie Mac remain in housing markets during downturns, using their federal ties to facilitate mortgage finance and support homeownership opportunity for all types of borrowers. Now is an inappropriate time for an adjustment in focus by the GSEs to build a secondary mortgage market around a product feature. Such a requirement could sidetrack the GSEs from the work our nation requires to help support the housing sector and the national economy.

REALTORS® believe that the GSEs' housing mission, and the benefits that are derived from it, plays a vital role in the success of our nation's housing system. Fannie Mae and Freddie Mac have demonstrated their commitment to housing by staying true to their mission during the current market disruptions by continuing to provide mortgage capital. Now is not the time to redesign the goals or expand the duties of the GSEs. Over the next year or so, Congress will consider many proposals to ensure that safe, affordable mortgage capital is available to deserving American families in all markets. NAR recommends that as part of this effort, Congress consider to what extent the GSEs or the replacement secondary mortgage model should reflect the objectives of sections 6 and 7.

3. Section 20 of the legislation relates to appraisals. The legislation proposes to 1) revise the standards for appraisals of federally-related transactions; and 2) establish specific requirements for appraisers related to energy-efficiency features. The Uniform Standards of Professional Appraisal Practice (USPAP) is the quality control standard applicable for real property in the United States. USPAP already requires appraisers to consider market factors to maintain appraisals as independent market valuations, which is critical to their success. Energy efficient improvements to homes will be reflected in the market-based value of the home through the appraisal. NAR is concerned that requiring appraisers to place a value on certain aspects of the home that are not included in the market-value of the property will distort housing markets and further exacerbate the housing crisis. If a feature adds value to a home an appraiser will note this in the appraisal without a requirement by law. Currently states implement subcommittee standards and qualification criteria for those appraisers involved in federal related transactions. The current draft of the bill could be viewed as an expansion of the subcommittee's authority or worse, direct federal regulation of the appraisal industry.

4. Section 27 provides FHA insurance for loans for renting renewable energy systems – separate from the mortgage. While we applaud the innovation of this type of program, we believe that the Department of Energy may be a better vehicle for federal financing of windmills and solar panel leases. We have concerns that these types of loans could negatively impact the FHA single family mortgage fund and believe further study is necessary before implementation.

NAR Supported Provisions

We strongly support the incentives and demonstration programs provided in Section 3, 4, 5, and 14. There are many property owners out there who aspire to improve their homes, but do not have the actual resources or tools to undertake these renovations. The bill provides homeowners with the resources and incentives to make their property more energy efficient. Unlike the Waxman/Markey labeling proposal (which we will discuss at length later), HR 2336 will facilitate changes in behavior and the implementation of energy efficient retrofits for homes and buildings. These improvements will not only benefit our environment, but will create jobs and reduce energy bills for consumers.

We also support Section 17. This provision of the bill amends the US Code to require a description of a jurisdiction's efforts to coordinate its housing strategy with its transportation planning strategies so that residents of affordable housing have access to public transportation. NAR's official policy encourages the integration of transportation planning into the general community planning effort, including planning for affordable housing. Our policy supports improving mobility so that all citizens have access to transportation means best suited to their needs. We encourage transportation planners to consider the needs of all transportation users when designing improvements. Therefore, we applaud this section of the bill which will foster a better coordination of transportation and housing plans.

We believe the most important provision of the bill is Section 9, which provides education and outreach to homebuyers and homeowners. The GSEs and FHA have both offered energy efficient mortgages for a number of years. However, the programs have failed to flourish, mostly due to lack of information on behalf of the homebuying public. We believe increasing public awareness of these products will go a long way to promoting their use. We also believe that REALTORS® are well-positioned to assist in this effort. As mentioned earlier, NAR has recently completed a Green Designation program, which is designed for residential, commercial and property management professionals. This new educational program provides REALTORS® with information about what it means to "go green" and the concerns of consumers seeking green knowledge about real estate. It includes ongoing specialized training that allows REALTORS® to speak knowledgeably about what makes a home, building or property green, the availability of green grants and incentives, and cost/benefit value of green homes and features. We believe REALTORS®, as the first point of contact with consumers, can be helpful advocates in this campaign.

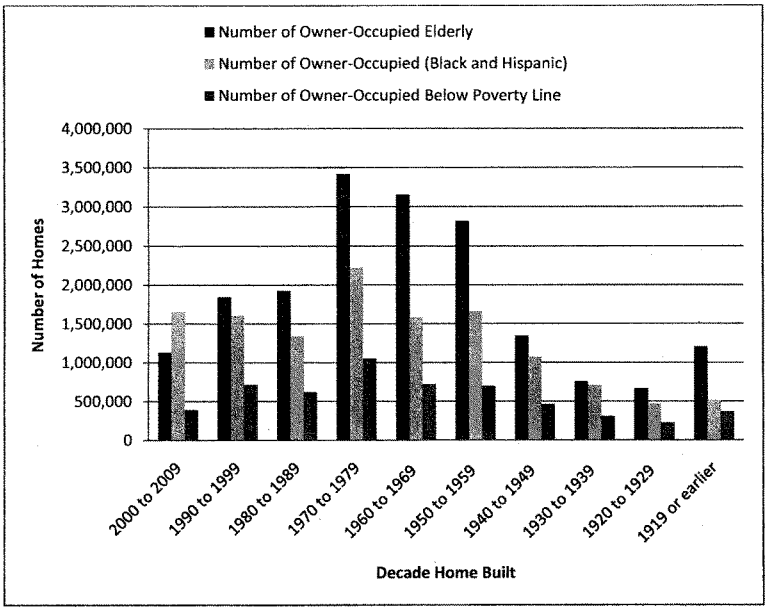
HR 2454 Building Energy Labeling Provisions

The Energy and Commerce Committee recently approved H.R. 2454, the American Clean Energy and Security Act that includes provisions which establish real estate labeling program. The legislation has been referred to this Committee. While the bill's authors and Mr. Perlmutter share the same objective (energy efficient homes), both bills adopt different approaches to improve building efficiency. The GREEN Act would encourage energy efficiency through financial incentives and mortgages – a sound approach, while H.R. 2454 will create a system of energy labels for homes and buildings and suggested triggers for state implementation of a labeling program. Again, NAR's members are committed to advancing consumer understanding energy efficiency, but these provisions will impose burdens on consumers and an already troubled housing market – without improving the energy efficiency of our nation's building stock in a timely manner.

Labeling every home in America will not improve building efficiency. The label will stigmatize older properties and further reduce property values in many areas around the country. At a time when retirement savings and property values have plummeted, many families and commercial property owners do not have the financial resources or equity to make needed energy-related improvements such as replacing aging heating and cooling systems, appliances or windows. Adding to the cost of homeownership will complicate the economic concerns that homeowners are already facing.

Of particular concern is the effect of energy labeling on properties that were not built to any specified energy code. The first national standardized building energy codes were not established until 1978. More than 60% of U.S. home were built prior to 1980, and will face a loss in value due to building labels. These properties could require significantly more improvements than newer properties in order to improve the labeling score and maintain property values. As the following table[1] shows, a disproportionate share of these older properties are owned by those populations – including 73% of elderly and 69% of those living below poverty -- that live on fixed incomes or are least able to afford those improvements without significant financial assistance. For example 64% of Hispanic and black owners reside in pre-1980 homes. We are also concerned that labels would not only stigmatize older homes but also the older inner city communities where they are located and which are struggling to maintain and continue to attract investment. My own state of Massachusetts considered adopting a similar energy scoring and labeling requirement at the point of sale. But due to concerns about stigmatizing properties and disadvantaging certain populations, the legislature opted instead to allow a buyer to waive the requirement.

[1] Source: American Housing Survey, 2007.



We are especially concerned with provisions could encourage state governments to require that labels be disclosed at the time of sale. The energy committee added a provision that specifies that the actual, physical labeling of a building could not occur after a contract has been executed – but that does not address the issue of a mandated disclosure and comes far too late in the sales process to avoid the disruption of a sale. As a practical matter, states will read this as a requirement to receive federal funding. Labeling and disclosure will be implemented at the time of sale – one of several optional trigger points in bill.

Our members' experiences with sales transactions indicate that labels will become a bargaining chip at closing to negotiate down selling prices without any assurance that energy-related improvements are made. In addition, with less than a very small percentage of homes changing hands each year even in a robust market, such an approach will prove ineffective at meeting the stated goals of the legislation in a timely manner.

Before prescribing new requirements for branding homes and buildings with labels, consumers require a better understanding of energy efficiency and, just as importantly, must be given the financial resources and incentives to make needed energy improvements. The GREEN Act includes many provisions that achieve those goals, and NAR would support those provisions that will provide the financial incentives needed by consumers to improve homes and buildings and result in significant energy savings in the very near term. But labels will not achieve either goal.

We respectfully urge the Committee to strike this labeling section in favor of retaining retrofit incentive programs in section 202 and applicable provisions of HR 2336, as the most effective means to improve energy efficiency in America's homes and buildings.

Conclusion

Again, thank you for the opportunity to testify. This is a timely hearing and topic. We recently wrote the Financial Services Committee about the labeling provisions of HR 2454; our letter is also attached. That bill has been jointly referred to this committee along with others, who have all been directed to complete their work within a few weeks.

We support the GREEN Act's approach to energy efficiency, and would welcome an opportunity to work with the committee to develop the approach as a substitute to the labeling provisions of the Waxman bill.

Written Testimony Submitted for the Record
June 11, 2009
Subcommittee on Housing and Community Opportunity

By

Charles Clevenger
Director, Stationary Air Conditioning (STAC) Business
Delphi Corporation

Good morning Chairwoman Waters and Ranking Member Capito. My name is Charles Clevenger, and I am pleased to offer testimony for today's hearing on H.R. 2336, the GREEN Act of 2009. I would also like to thank Congressman Chris Lee, who represents Delphi's facilities in Lockport, NY for his assistance in securing this opportunity for Delphi to offer testimony today.

About Delphi Corporation:

Delphi is a leading global supplier of mobile electronics and transportation systems, including powertrain, safety, steering, thermal, and controls & security systems, electrical/electronic architecture, and in-car entertainment technologies. Engineered to meet and exceed the rigorous standards of the automotive industry, Delphi technology is also found in computing, communications, consumer accessories, energy and medical applications. Headquartered in Troy, Mich., Delphi has approximately 133,000 employees and operates 138 wholly owned manufacturing sites in 34 countries with sales of $18.1 billion in 2008.

Delphi is committed to our vision of safe, green and connected. We share the goals of the Committee of protecting the environment.

I am not here today to talk about Delphi's automotive capabilities– but about the innovative transition of our automotive technologies to adjacent markets. We make technologies compact and efficient for vehicles – then transfer those advances to other uses for our products. Our Delphi Micro Channel Heat Exchanger is a classic example of this technology transfer.

Trends in HVAC Use – Rising Costs:

The Electric Power Research Institute (EPRI) is forecasting U.S. electricity use to increase by 1.2% per year through 2030. By that time, air conditioning use will consume nearly 13% of all U.S. electricity. Residential AC will consume 19% of residential electricity by 2030 with a growth rate of 1.7%, and Commercial AC electricity consumption will grow by 1.4% per year through 2030. This study assumes that enacted energy-efficiency legislation will be implemented as scheduled in their forecasts.

U.S. Consumers are becoming more aware and more concerned about the need to conserve energy. Consumers, however, do not believe they are to blame for rising energy costs and – despite the numbers – refuse to believe that they are using more energy per year. What we are

seeing is that consumers have a high tolerance for accepting higher energy bills rather than investing in more energy-efficient devices.

Environmental regulation is evolving, resulting in stricter international, federal, state and local laws, and regulations concerning the environment. The Energy Independence and Security Act of 2007 allows DOE to establish regional efficiency standards for residential furnaces, air conditioners, and heat pumps by 2016. Residential furnace and boiler standards will change in November 2015. These new regulations and standards are driving HVAC product performance improvements.

But consumers use existing less-efficient equipment because the new higher efficiency equipment has a higher upfront cost. Incentives are necessary for consumers to purchase new equipment because regulations may drive consumers to buy less-efficient equipment before regulations take effect in order to avoid higher future costs.

The U.S. HVAC market is typically 25% new construction and 75% replacement business. As a result of the current economic climate, the share of the replacement market is increasing to 80%. In addition, a worsening economy increases the tendency to delay major HVAC replacements. There is a perception that energy-efficient products cost considerably more, and consumers are reluctant to embrace energy-efficient devices because of aesthetics, payback time period, and initial price. In our experience, rebates are not a great incentive because of the hassle to consumers to complete an application and wait to receive the rebate.

Delphi Thermal – qualified to offer a solution

Delphi Thermal Systems delivers enhanced energy efficiency, environmentally friendly, world-class comfort and convenience through fully integrated heating and cooling systems, modules and components globally. Our divisions include Delphi Thermal Systems Automotive which develops, designs, and manufactures Powertrain Cooling Systems, Heating Ventilation & Air Conditioning Systems, and Compressors; and Delphi Thermal Systems New Markets which develops, designs and manufactures Stationary and Transport Air Conditioning/Refrigeration systems.

Delphi Thermal Systems has 99 years of experience in heat exchangers. In 1910, Herbert Champion Harrison founded Harrison Radiator Company in Lockport, New York. Harrison invented the Hexagonal Cell Honeycomb Radiator. From 1942-1984, Delphi Thermal manufactured a wide array of Heat Exchangers for aerospace, aviation, industrial and commercial applications. In 1992, Delphi Thermal transitioned from the traditional tube and fin to micro channel technology for heat exchangers. In 2001, Delphi Thermal Systems created a business unit to support heating/cooling needs in non-automotive markets. In 2006, Delphi Thermal Systems produced the first high-volume brazed micro channel condenser for residential air conditioning.

Delphi now manufactures 3 million micro channel heat exchangers annually – we have the largest number of units in the field. Delphi has shipped more than 50 million MCHX parts globally. Our product has demonstrated success in every major market. We are currently

supplying to transportation (refrigerated trucks), residential, retail food storage and bottle cooling and commercial (chillers & rooftop units) markets.

Delphi Thermal - The solution:

We are excited to have the opportunity to share with this Committee the benefits of the Delphi Micro Channel Heat Exchanger, a technology that we believe can help this Committee achieve its goal of increasing the energy efficiency of homes in a cost effective manner.

Delphi's state-of-the-art Micro Channel Heat Exchangers can provide more energy efficient cooling than traditional AC units. Its unique design enhances product efficiency by joining its components together in a single coil – ultimately helping meet demands for less storage space, easier installation, and enhanced aesthetics. Our product, in combination with increased federal standards and incentives, will give consumers the opportunity to save money, space and energy while lessening the impact on the environment.

The Delphi unit has the potential to provide improved energy efficiency and reduce the impact on the environment because it is smaller and lighter than traditional units; is 100 percent recyclable; uses less refrigerant; and is able to achieve higher energy efficient ratings.

Our product can provide mass, size and refrigerant reductions. For condensers, our product offers a weight reduction of 10-30% and a refrigerant reduction of 20-40%; for evaporators, a weight reduction of 40-50% and a refrigerant reduction of 10%; and for heat pump coils, a weight reduction of 10-20% and a refrigerant reduction of 10-30%. These benefits translate to lower shipping costs; lower warehousing costs; lower cost of packaging materials; lower cost of structural materials; and lower cost of refrigerants. Other benefits include a higher thermal capacity (5-20%), simplified plumbing and connections, lower applied cost, and less fin damage. Our all aluminum construction is 100% recyclable.

Transitioning 1 traditional condenser (tube & fin) to a Delphi MCHX condenser would yield:

- 16 lb. weight reduction due to MCHX condenser;
- 30 lb weight reduction for the outdoor unit
- 1.7 lbs in refrigerant reductions
- 8.6 cubic ft in size reduction

If every U.S. household were equipped with a Delphi MCHX condenser, the results would be:

- 120 million lbs of less refrigerant in the atmosphere
- 1.1 billion lbs in weight reductions due to MCHX Condenser
- More energy-efficient, optimized heating/cooling systems

Imagine the possibilities.

SEER Case Study – Illustrates Delphi Capabilities/Efficiencies

Examining changes in the Seasonal Energy Efficiency Ratio (SEER) – a rating on comfort equipment - illustrates the benefits of the Delphi product to both the economy and the environment. For each unit of SEER improvement, an average household would save $33 per

year. The Energy Policy Act of 2002 increased from 10 to 13 in order to enhance energy conservation and provide for security and diversity in the energy supply. When enacted, the 13 SEER was predicted to save the nation **4.2** quads of energy over the next 25 years (equivalent to the energy consumed by nearly *26 million U.S. households* annually). The standard is expected to save consumers **$1 billion** over the same period.

The benefits of this transition from SEER 10 to 13 include significant energy savings, reduced energy bills for homeowners (an estimated 23% energy savings); and reduced greenhouse emissions and air pollutants, saving an estimated 7.2 million metric tons of carbon in 2020. But for a traditional HVAC unit, the SEER transition has associated costs. The size of the units must increase to achieve increased efficiency, which demands increased shipping costs, increased manpower for shipping, increased product cost, and increased refrigerant use (estimated 40% more) and environmental impact.

In contrast – the Delphi Micro Channel Heat Exchanger is able to provide the increased SEER without the costs involved in a traditional unit. Our product is smaller, lighter, and more efficient. It requires less packaging, and uses less energy in shipping. The all-aluminum construction is 100% recyclable. And the product is more environmentally friendly because it uses less refrigerant. Delphi is confident that we could achieve 16 SEER efficiency in the same size unit as a traditional 13 SEER.

Conclusion

Delphi is proud of our success in driving the market to achieve increased efficiency at a lower cost. We are committed to increasing utilization of products that protect our environment and preserve our energy sources for the future. We look forward to working with this Committee as it develops legislation to achieve this goal.

Thank you again for the opportunity to present testimony to this Committee.

THE AMERICAN INSTITUTE OF ARCHITECTS

STATEMENT FOR THE RECORD

"The Green Resources for Energy Efficient Neighborhoods Act"

United States House of Representatives
Committee on Financial Services
Subcommittee on Housing and Community Opportunity

-

June 11, 2009
Rayburn House Office Building

The American Institute of Architects
1735 New York, Ave, NW
Washington, DC 20006
(202) 626-7507
govaffs@aia.org
www.aia.org

INTRODUCTION

The American Institute of Architects strongly supports the Green Resources for Energy Efficient Neighborhoods (GREEN) Act (HR 2336). This landmark legislation will promote energy efficiency in our nation's residential building sector, providing direct benefits to the environment, our economy, and especially to the millions of Americans who are struggling to cope with rising energy prices. The AIA strongly supports policies that conserve our Earth's natural resources as America's architects have long understood the importance of energy efficiency. Therefore, the AIA strongly supports the GREEN Act, which represents the 111th Congress's most comprehensive effort to promote energy efficiency in the residential buildings sector.

BUILDINGS AND ENERGY USE

The Department of Energy's 2007 Building Energy Data Book reveals that the building sector accounts for 39 percent of total U.S. energy consumption, more than both the transportation and industry sectors.[1] According to the Department of Energy's Energy Information Administration, buildings and their construction are responsible for nearly half of all greenhouse gas emissions produced in the U.S. every year. The same study found that buildings are responsible for 71 percent of U.S. electricity consumption and that *buildings in the United States alone account for 9.8 percent of carbon dioxide emissions worldwide.*[2]

In fact, according to the Department of Energy, U.S. *buildings account for nearly the same amount of carbon emissions as all sectors of the economies of Japan, France, and the United Kingdom combined.*[3] Therefore, if we in the United States want to be serious about energy reductions, buildings *must* become a significant part of the discussion.

The data shows that the building sector is only going to become more critical to the discussion. Annual U.S. energy consumption is projected to increase by 32 percent over the next twenty five years[4]. The AIA believes strongly that now is the time to act to reverse this course and start making significant reductions in the amount of fossil-fuel generated energy our nation consumes through its buildings.

Over the next 30 years, the character of the built environment will change dramatically. Currently, U.S. building stock sits at 300 billion square feet. Experts predict that between now and 2035, 52 billion square feet will be demolished, 150 billion square feet will be remodeled, and another 150 billion square feet will be newly constructed.[5] Because buildings are such a major producer of greenhouse gases, the AIA believes that if Congress and our nation want to reduce greenhouse gas emissions, addressing energy consumption in the next generation of buildings is a vital endeavor. We believe that the federal government can and must take the lead to change the way our buildings use energy.

To reduce energy consumption in the building sector, the AIA believes that architects must advocate for the sustainable use of our earth's resources through their work for

clients. To support this principle, in 2005 the AIA adopted a position stating that all new buildings and major renovations to existing buildings be designed to meet an immediate 50 percent reduction in fossil fuel-generated energy (compared to a 2003 baseline) and that at five year intervals, that reduction target be increased by at least 10 percent until new and renovated buildings achieve carbon neutrality in 2030.

Architects across the country have embraced this principle and are currently utilizing design practices that integrate built and natural systems that enhance both the design quality and environmental performance of the built environment. But in order to truly revolutionize the way our nation designs buildings, the public sector, especially the federal government, must also play a role. Federal government agencies, programs and sponsored enterprises have a major impact on the residential building sector. Through a combination of regulation and incentives, we can achieve the goals of greatly reducing fossil fuel generated energy and improving energy efficiency nationwide.

In the past, the AIA worked with Congress to address energy use in federal buildings. The 2007 Energy Independence and Security Act (P.L. 110-140) included a provision mandating that all new and significantly renovated federal buildings meet strict energy-use requirements. The new energy targets required of federal buildings will demonstrate to the private sector that the federal government is leading by example. It will also help spur the development of new materials, construction techniques, and technologies to make buildings more energy efficient. And it will help show that significant energy reductions are both practical and cost-effective.

The new energy efficiency requirements for federal buildings achieved through the 2007 energy bill will literally transform the way the government designs and constructs buildings. In order to make even greater reductions in the energy used by our nation's buildings, we must build upon this momentum and do more to promote energy efficiency across the economy. The GREEN Act will do just this. This legislation includes a carefully balanced mix of incentives and requirements to achieve greater energy efficiency in the residential sector, providing direct benefits to the environment, the economy, and homeowners and renters across the country.

THE GREEN ACT

The legislation (H.R. 2336) under consideration by this Committee is by far the most comprehensive attempt to promote energy efficiency at the residential level to emerge from the current Congress. The AIA strongly supports this legislation as it will set new energy efficiency standards for new residences and existing homes under the jurisdiction of the Department of Housing and Urban Development. The legislation requires the new or renovated structures to comply with the most widely accepted energy standards currently in existence. By requiring residences to be designed and constructed in accordance to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standard 90.1 and the International Energy Conservation Code (IECC), the legislation rightfully prescribes energy efficiency standards that were developed under open, consensus-based process. And by offering additional credit to projects that achieve even greater energy efficiency, measured by the Leadership in

Energy and Environmental Design (LEED) Gold Standard, the national Green Communities criteria checklist for residential construction, and the Green Globes assessment and rating system, the legislation truly incentivizes green design and construction in the most practically applicable manner.

Establishing new energy standards for HUD-supported residences is a prudent and effective strategy to ensure that the benefits of energy efficiency reach the Americans who truly need them. Energy costs are soaring across the country, and many citizens are being pushed to the financial limit by skyrocketing utility bills. Designing and constructing energy efficient homes, complete with energy efficient appliances, as well as heating, air conditioning, and lighting systems, will provide an immediate financial benefit to homeowners and renters through reduced utility costs. The demonstration program authorized by the bill will highlight this by showing the effectiveness of providing federal assistance for energy efficiency measures for multi-family housing. Increasing energy efficiency and decreasing utility bills will provide direct benefits to the economy as well as the intrinsic advantages that reduced energy consumption offers our natural environment.

While establishing new energy standards for some residences will make great strides toward promoting residential energy efficiency, it is only one part of the overall strategy to achieve economy-wide energy savings. In order to truly bring about meaningful changes in individual, corporate, and institutional behavior (relating to energy use), a multi-faceted approach is necessary. The GREEN Act rightfully acknowledges this and

includes important policy ideas that will promote energy efficiency by providing incentives to lenders and financial institutions to provide lower interest loans and other benefits to consumers who build, buy, or remodel their homes, and to businesses to improve their energy efficiency. Specifically, the bill will promote the use of Energy Efficient and Location Efficient Mortgages (EEMs and LEMs).

EEMs are effective financial tools that provide incentives to homeowners to purchase energy efficient homes or renovate existing homes to make them more energy efficient. As owners of energy efficient homes will pay significantly less in monthly utility bills due to reduced energy use, EEMs allow borrowers to qualify for a higher mortgage limit because the homeowners will spend less on monthly energy costs and decreased energy costs increase the security of the mortgage. LEMs are directed toward borrowers who live in high-density areas near transit and will likely have reduced transportation costs. Those who qualify for LEMs will face reduced monthly *transportation* costs, allowing borrowers to qualify for higher mortgages. EEMs and LEMs are currently offered by many lenders across the country, but in order for them to truly expand across the economy, the federal government must play a role.

The AIA strongly supports policies that will promote the use and availability of EEMs and LEMs. We are therefore especially pleased by provisions in this bill that will result in more EEMs and LEMs in the marketplace. This bill requires both Fannie Mae and Freddie Mac to purchase, sell, service, lend on security, and otherwise deal in EEMs and LEMs. In order to support this goal, the bill requires HUD, the Departments of Energy

and Education, and the Environmental Protection Agency to carry out a public awareness, education, and outreach campaign to inform and educate residential lenders and prospective borrowers regarding the availability, benefits, advantages, and terms of energy efficient mortgages. This is a critical endeavor as many lenders and borrowers simply do not understand EEMs and LEMs or in some cases, realize that they even exist.

The legislation also includes provisions that will require state and local housing agencies to assess the impact of transportation planning on housing as a condition of receiving HUD funding. This will ensure that residents of affordable access have access to public transportation, echoing the principles of smart growth, transit oriented development, and location efficiency. The AIA strongly supports these provisions, under Section 17 of the legislation.

As stated above, this bill represents Congress's most comprehensive effort to promote energy efficiency across the residential sector of our nation's buildings. We are pleased that the legislation includes a Residential Energy Efficiency Block Grant Program, as this will ensure that cities and states have the financial tools available to conduct energy efficiency programs for their residents. We also strongly support provisions that will require appraisers to consider renewable energy sources for or energy efficiency improvements to the property being appraised. The bill also requires federal financial institutions to revise their appraisal standards to include the value of energy efficiency in home appraisals. These provisions will ensure that the energy efficiency achievements that designers and builders accomplish will be valued in the price of the home. These are

necessary steps that will in time, change the way our nation thinks about energy use and will result in energy savings across the economy.

America is Ready

The American public believes the time is now to reduce energy usage and reduce the impacts of climate change. The Tarrance Group and Lake Research Partners recently conducted a nationwide poll of voters and found that 74 percent of those polled agreed that "the government should take the lead in promoting real estate development that conserves our natural resources." In addition, 71 percent of voters agreed that "the government should immediately put into effect new energy policies that drastically reduce greenhouse gas emissions." The American public supports conserving our precious resources, and believes that it is in the best interests of our nation and the world to reduce our reliance on fossil fuel produced energy and move towards a sustainable future. Reducing energy use in our nation's homes would be a major step towards that goal.

We strongly support the members of this committee in their efforts to make the nation's housing stock more energy efficient. This legislation will reduce energy costs for Americans, reduce our demand on foreign sources of oil, and preserve our natural environment.

---

[1] http://buildingsdatabook.eere.energy.gov/docs/1.1.3.pdf
[2] http://buildingsdatabook.eere.energy.gov/docs/3.1.1.pdf
[3] http://buildingsdatabook.eere.energy.gov/docs/3.1.1.pdf
[4] http://www.eia.doe.gov/oiaf/ieo/pdf/ieoreftab_1.pdf
[5] http://www.architecture2030.com

June 10, 2009

The Honorable Ed Perlmutter
415 Cannon House Office Building
Washington, DC 20515

Dear Representative Perlmutter:

We the undersigned organizations would like to express our support for H.R. 2336, the Green Resources for Energy Efficient Neighborhoods (GREEN) Act, which will be the focus of an upcoming hearing held by the House Financial Services Subcommittee on Housing and Community Opportunity. We appreciate your leadership in sponsoring this important bill and we believe it is the next major step in the federal government's commitment to ensuring that affordable housing is more energy efficient, healthy and environmentally sustainable.

The principles and practices of "green" development offer proven, cost effective ways to address current and longstanding housing challenges, rising energy and transportation costs and the effects of global warming, all of which disproportionately affect low-income people. There is experience and research showing that affordable housing can deliver significant health, economic and environmental benefits from green building and rehabilitation practices on a cost effective basis with the right resources and approach. This holds true for all kinds of housing developments, in smaller as well as larger communities, throughout the country.

The building sector is the single largest emitter of greenhouse gases in the United States, and Americans' demand and consumption of electricity grows by the day. The modifications to federal housing and lending policy proposed in H.R. 2336 will provide financial tools for homeowners and the building sector to curb energy use. In addition to its contribution to reducing global warming pollution, the bill encourages monetary savings on electricity bills for low- and middle-income Americans, as well as the federal government. These savings are crucial for low-income families, as they can spend nearly 20 percent of their annual income on utilities—four times more than even a median-income household.

The GREEN Act incentivizes wise environmental and economic investments by both the government and consumers. "Greening" affordable housing – making it more energy efficient, healthier and more environmentally sustainable – will help to ensure that the enormous promise of the emerging green economy includes opportunities for everyone in our society.

We hope the Subcommittee, the full Committee and the House will move to expedite consideration of the GREEN Act and we look forward to working with you to help make that happen.

Please call upon us if we can provide additional information or assistance.

Sincerely,

Alliance for Community Trees
Alliance to Save Energy
American Architectural Foundation
American Public Health Association
American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
American Institute of Architects
American Planning Association
American Society of Landscape Architects
Architecture 2030
Carpet and Rug Institute
Center for American Progress Action Fund
Center for Environmental Innovation in Roofing
Center for Neighborhood Technology
Council of Large Public Housing Authorities
Enterprise Community Partners, Inc.
Environment America
Environmental and Energy Study Institute
Federation of American Scientists
Global Green
The Green Standard
Housing Assistance Council
International Code Council
Jonathan Rose Companies
Lennar Ventures
Local Initiatives Support Corporation
National Alliance of Community Economic Development Associations
National Association of State Energy Officials
National Center for Healthy Housing
National Coalition for Asian Pacific American Community Development
National Housing Conference
National Housing Trust
National Institute of Building Sciences
National NeighborWorks Association
Native American Indian Housing Council
Smart Growth America
Stewards of Affordable Housing for the Future
U.S. Green Building Council

○