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GREEN HOUSING FOR THE 21ST CENTURY: RETROFITTING THE PAST AND BUILDING AN ENERGY–EFFICIENT FUTURE

HEARING

BEFORE THE

SUBCOMMITTEE ON
HOUSING, TRANSPORTATION, AND COMMUNITY DEVELOPMENT

OF THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

ON

EXAMINING THE BUILDING OF AN ENERGY–EFFICIENT FUTURE

JUNE 30, 2010

Printed for the use of the Committee on Banking, Housing, and Urban Affairs

Available at: http://www.access.gpo.gov/congress/senate/senate05sh.html

U.S. GOVERNMENT PRINTING OFFICE

61–989 PDF WASHINGTON : 2010

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GREEN HOUSING FOR THE 21ST CENTURY: RETROFITTING THE PAST AND BUILDING AN ENERGY–EFFICIENT FUTURE

WEDNESDAY, JUNE 30, 2010

U.S. SENATE,
SUBCOMMITTEE ON HOUSING, TRANSPORTATION, AND COMMUNITY DEVELOPMENT,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Subcommittee met at 10 a.m., in room SD–562, Dirksen Senate Office Building, Senator Robert Menendez (Chairman of the Subcommittee) presiding.

OPENING STATEMENT OF CHAIRMAN ROBERT MENENDEZ

Chairman MENENDEZ. This hearing of the Subcommittee on Housing, Transportation, and Community Development will come to order. I look forward to hearing from my colleague, our House colleague in just a minute. I will start with an opening statement, and we will move to them.

One of the great challenges we face as a society is how to build a sustainable energy future, one that can make us self-sufficient as a Nation and reduce the devastating impacts of climate change. I believe that any strategy to address these challenges has to involve the buildings where we live.

In the United States, buildings account for 72 percent of electricity consumption, 39 percent of energy use, 38 percent of all carbon dioxide emissions, 40 percent of raw materials used. That is 3 billion tons annually.

Fortunately, in recent years there have been tremendous advances in green building technologies, and I see great potential to apply these technologies to our current and future homes. It is woefully inadequate that today only about 2 percent of homes in America are being built according to green standards. The spread of green housing is not only imperative from an environmental standpoint, it can also produce real cost savings, particularly for Americans seeking to achieve their American dream and homeownership. That is why I see green housing as a win-win opportunity. It is good for our planet. It is good for homeowners. I can be good for our economy as well as our environment. It is good for the opportunity to create a vibrant green building industry, which means new jobs are being created, good green jobs.

That is why I am delighted to be chairing today's hearing, "Green Housing for the 21st Century: Retrofitting the Past and

Building an Energy-Efficient Future." The goal of today's hearing is to explore proposals to encourage energy-efficient home construction and retrofitting and, in particular, the Energy Efficiency in Housing Act, S. 1379, which I am proud to cosponsor with Senator Whitehouse.

Over the course of this hearing, I look forward to asking questions and learning more about the state of green housing, the current market for green housing, and what we as a Congress can do to bring our Nation's housing stock in line with the energy-efficient technologies of the 21st century.

We are very fortunate to have firsthand testimony from some of the best minds on how to make our homes green and energy efficient. Our first panel will feature my distinguished colleague Senator Sheldon Whitehouse from Rhode Island, who is the author of the Energy Efficiency in Housing Act, and we will also be hearing from our colleague Congressman Earl Perlmutter of Colorado, who is a sponsor of the House companion bill, the GREEN Act.

Our second panel will feature the Honorable Ron Sims, Deputy Secretary, United States Department of Housing and Urban Development.

And on our third panel, we will hear from Mr. Dave Caldwell, Vice President of Caldwell and Johnson, a homebuilding firm; and Ms. Trisha Miller, the Director of Green Communities at Enterprise Community Partners; and Mr. Kenneth Gear, Executive Director of Leading Builders of America. And I look forward to their testimony, particularly, in addition to what we are trying to do here, how we can incentivize the marketplace and look at mortgages that may move us in the right direction to incentivize green building as well.

With that, my dear colleague and friend, Senator Sheldon Whitehouse.

STATEMENT OF SHELDON WHITEHOUSE, SENATOR FROM THE STATE OF RHODE ISLAND

Senator WHITEHOUSE. Chairman Menendez, thank you for the opportunity to speak this morning and for holding this hearing to examine proposals to encourage energy efficiency in the housing sector, including my Energy Efficiency in Housing Act. I want to particularly thank my friend Representative Ed Perlmutter for leading the way on this crucial topic. He has succeeded in shepherding green housing legislation through the House and has been one of the leading champions of energy efficiency.

I also want to acknowledge Dave Caldwell, on the third witness panel, who has led pioneering efforts in green building in Rhode Island and has traveled down to D.C. to share his experiences with the Committee.

I hope that this hearing will make clear that energy-efficient housing connects tackling climate change and reducing our dependence on foreign fossil fuels to cutting Government outlays and trimming household budgets, to renovation, design, and construction jobs that cannot be exported. Despite this promise, energy-efficient options in housing are not well understood by consumers, and homebuyers today often pass up green opportunities that are in their economic interest. Our challenge as legislators is to devise

programs to inform consumers and jump-start our green housing economy.

Representative Perlmutter's GREEN Act is the first comprehensive green housing bill to be introduced in Congress. Working with you, Chairman Menendez, and Senator Schumer, I drafted a companion to the GREEN Act and introduced it last June. Similar to Representative Perlmutter's bill, the Energy Efficiency in Housing Act would authorize programs and incentives to encourage green construction and retrofitting. The support of the home builders and the mortgage bankers shows that this is common-sense legislation.

EEHA would energize the market for energy-efficient and location-efficient mortgages by directing the HUD Secretary to develop up-front incentives for homebuyers. As a result of lower monthly energy costs, green homeowners are slightly less likely to default on their mortgages over time. This lower credit risk justifies borrowing incentives such as waived fees and lower points and rates. Additionally, EEHA would create incentives in the secondary mortgage market, making it more profitable for lenders to sell these products.

On the public housing side, EEHA would require the Secretary to develop incentives for energy efficiency for the housing programs that HUD oversees, designed so that the savings are shared between landlord and tenant. To help find the right balancing points, the bill would authorize a 50,000-unit demonstration program for Section 8.

As Members of this Subcommittee well know, housing programs often cut across layers of government. To help State and local governments experiment with novel and innovative green housing programs, EEHA would authorize a revolving loan fund. It would also create a grant program so that community development nonprofits can participate in and administer construction and retrofitting efforts.

Mr. Chairman, I once again commend you and express my great personal appreciation to you for holding this hearing. With buildings accounting for between 40 percent and 50 percent of greenhouse gas emissions, green housing incentives offer environmental promise in addition to jobs and cost savings—the win-win you mentioned, Mr. Chairman.

I thank you.

Chairman MENENDEZ. Thank you, Senator.

Congressman Perlmutter.

STATEMENT OF ED PERLMUTTER, REPRESENTATIVE IN CONGRESS FROM THE STATE OF COLORADO

Mr. PERLMUTTER. Senator Menendez, thank you for inviting me here to testify on green housing and energy efficiency. Renewable energy and energy efficiency have long been priorities of mine. We must find different ways to power our country and find ways to save energy wherever possible. Combined, our homes, businesses, schools, governments, and industries consume more than 70 percent of the natural gas and electricity used in the country.

When I came to Congress in 2007, I was selected to serve on the House Financial Services Committee. Chairman Frank recognized the interest in energy efficiency among Committee Members and

asked me to head the Energy Efficiency Task Force. The task force included Democrats and Republicans. We held a number of meetings to gather feedback. And as a result of this feedback, Congresswoman Judy Biggert and I introduced the Green Resources for Energy Efficient Neighborhoods Act, the GREEN Act. The GREEN Act initially passed as part of the comprehensive energy package in the 110th Congress and then again in the 111th Congress.

I have worked with Senator Whitehouse since the beginning when we started the task force. He has introduced companion legislation, and I would like to thank him—I would like to take this opportunity to thank him for all his work and expertise on these matters. For the purposes of my testimony, I will refer to the GREEN Act and Senator Whitehouse's Energy Efficiency Housing Act of 2009 interchangeably.

The legislation is an incentive-based bill and will help create jobs and save taxpayers money. According to an independent study by the American Institute of Architects, the GREEN Act would potentially create more than 140,000 jobs, and at this time, I would like to submit this study for the record.

Chairman MENENDEZ. Without objection.

Mr. PERLMUTTER. HUD estimates it spends approximately $5 billion on both direct and indirect energy costs, making energy one of HUD's biggest line items. This legislation establishes a demonstration program of 50,000 HUD units to show cost-effectiveness and to confirm utility costs will go down. HUD estimates a conservative savings of just 5 percent would save taxpayers $1 billion over the next 5 years. Savings from energy efficiency will also help improve the quality of life for consumers while putting money back in their pockets.

The legislation include energy-efficient and location-efficient mortgage outreach, a critical component to fostering livable communities. A renewable energy systems leasing program will be developed, allowing consumers to take advantage of renewable energy without the up-front costs. Appraisal standards are updated to ensure that energy-efficient and renewable features are taken into account during the appraisal process, a necessary step toward properly incentivizing green housing.

The provisions included in the act were developed in consultation with stakeholders and other industry experts. Many groups support this legislation, including the National Association of Home Builders, the National Multi-Housing Council, the Mortgage Bankers Association, the U.S. Green Building Council, Enterprise Community Partners, the American Planning Association, the American Institute of Architects, and individual companies such as LENNAR Ventures.

Both the GREEN Act and Energy Efficiency in Housing Act are examples of the forward thinking we must do to encourage energy efficiency and move our Nation toward greater energy independence. These bills strike a balance by showing it is easy to be green, making energy-efficient practices more affordable, accessible, and achievable. Simply put, energy-efficiency measures are, as the Chairman said, good for national security, good for the environment, and good for jobs and the taxpayers. For these reasons, I

hope the bill introduced by Senator Whitehouse will be part of the energy conversation going forward.

I look forward to working with you and with my colleague to move this legislation. Thank you again for the opportunity to speak.

Chairman MENENDEZ. Well, let me thank both of you for your leadership in this regard. I think that lays an excellent foundation for why this legislation makes a lot of sense. I have no doubt that it will be part of the energy portfolio that we are trying to pursue. With that, I thank you both and look forward to working with you to make this happen.

Senator WHITEHOUSE. Thank you, Mr. Chairman.

Mr. PERLMUTTER. Thank you.

Chairman MENENDEZ. Our next witness is HUD's Deputy Secretary Ron Sims. I am going to ask the Secretary to come on up.

Deputy Secretary Sims was unanimously confirmed, something that is rare here, by the U.S. Senate on May 6th of 2009 as Deputy Secretary for the Department of Housing and Urban Development. He is the second-most senior official at HUD. He is responsible for managing the Department's day-to-day operations, nearly a $40 billion annual operating budget and the agency's employees, and we appreciate you being here today to share HUD's views on the issue of the legislation that we just heard about.

Mr. Secretary.

STATEMENT OF RON SIMS, DEPUTY SECRETARY, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Mr. SIMS. Good morning, Chairman Menendez, and also Senator Warner. It is a pleasure and honor to be here.

I want to thank you for this incredible opportunity to testify on the Energy Efficiency in Housing Act of 2009. I want to commend you, as well as Senator Whitehouse, Senator Schumer, Senator Bennet, and Senator Merkley for your support for energy efficiency and green building. And I want to thank Congressman Perlmutter for his incredible work in the House. I have been working closely with him as well.

I also want to thank you and Chairman Dodd for your work on the Livable Communities Act. The Livable Communities Act would permanently authorize HUD's Office of Sustainable Housing and Communities and solidify our partnership for sustainable communities with the U.S. Department of Transportation and EPA. We strongly support that legislation and intend to provide the Committee with technical comments in the near future.

I am also pleased today to express support for Senate bill 1379 as it impacts HUD's program and policies. This bill represents an important effort to address the high cost of heating, lighting, and cooling housing in the United States, especially with portable housing. We also support both the energy efficiency as well as the location efficiency of the build environment.

I would let you know that our support for the bill is contingent on a number of technical amendments that would more closely align it with the House version as well as HUD—excuse me. I do not know why I am nervous—as well as HUD's new programs and policies.

I will touch on a few areas where we believe correction or modification will help HUD implement this important legislation in the future and link it more closely with HUD's current initiatives.

First, with regard to minimum standards, our understanding of the bill is that it gives the Secretary the discretion to apply minimum or enhanced energy and green standards rather than mandating them. There is a green premium for implementing new standards that HUD believes may be to raise the corporate—accordingly.

We also recommend reordering and amending the provision related to underwriting energy-efficient and location-efficient mortgages. We recommend allowing the proposed commission in the legislation to complete its work and to make its recommendations to FHA for consideration—creating new products without such guidelines. We also want to ensure that the definition of an energy-efficient mortgage works and that budget neutrality is applied to the FHA Mortgage Insurance Fund.

I look forward to working with the Committee staff to address these issues and ensure that HUD can do proper due diligence on the feasibility of implementing the new program.

I had to be really nervous not to push that button.

As the former county executive of King County, Washington, where we developed one of the most cutting-edge green building and smart growth programs in the country, I bring to HUD a personal commitment of putting HUD-assisted properties at the forefront of creating a greener economy. Some believe green buildings is only affordable for higher incomes. I believe that we cannot afford not to build green.

While everyone is hurt by the high energy costs, no one is more vulnerable to rising energy prices than low- and moderate-income families. Large-scale initiatives such as the Enterprise Green Communities program show that properties achieving 20 to 30 percent greener energy efficiency yield cost savings that accrue directly to low-income residents or are reinvested back into the property in which they live. HUD's own budget faces challenges because of skyrocketing energy costs. HUD spends $5 billion on energy for our public housing and Section 8 operations. A modest savings of 5 percent could generate a savings of $1 billion for taxpayers over the next 5 years.

Sustainable green building has a clear connection to better health as well. In King County, we found that people living in the most walkable were less likely to be overweight and more likely to be physically active and that wide health disparities existed between low-income families and persons of color and the rest of the population in traditionally poor neighborhoods.

But as we saw in the High Point public housing development in Seattle, building green can change the equation entirely. It became an economic engine in the community that everybody had given up on and once called "the armpit of King County." Green building requires a new generation of professionals not simply ready to build these technologies but to install, repair, and maintain them—mechanics and electricians and plumbers and construction workers who will pioneer the wave of green technologies.

For all of these reasons, Secretary Donovan and I are committed to making HUD a leader in green development. Nowhere is this commitment more evident than HUD's new strategic plan, which was published last month.

One of HUD's strategic goals is to promote energy-efficient buildings and location-efficient mortgages and communities that are healthy, affordable, and diverse. That is why over the next 2 years HUD aims to create 159,000 energy-efficient or green housing units through our Recovery Act initiatives and our ongoing programs.

We have also invested significant Recovery Act funds in greening our housing stock. Our green retrofit program is helping to retrofit 20,000 federally assisted housing units. In public housing, we have financed over 35,000 energy retrofits. We also provided greening incentives with our Indian housing and our Neighborhood Stabilization Program.

Looking beyond current programs and funding, we are currently implementing a new $50 million energy innovation fund. This fund will pilot various innovation strategies for financing cost savings and energy-efficient measures for both single- and multi-family—excuse me—in both the single- and multi-family sectors. We expect to deploy these funds later this year and will keep the Committee closely informed.

We are also hard at work on a comprehensive energy action plan that will provide detailed reporting on energy consumption and expenditures in HUD-assisted housing and lay out a set of specific steps HUD will take over the next 2 years to dramatically increase the environmental performance of HUD-assisted housing. We look forward to sharing the next vision with the Committee later this year.

I believe that HUD's energy efficiency program initiatives are closely aligned with what Senate bill 1379 proposes. I hope we can work together in the future to align our strategies for achieving our shared goals.

Thank you, and I look forward to answering any questions you may have.

Chairman MENENDEZ. Thank you, Mr. Secretary. And I am a little confused myself. I thought green normally means talk and red means don't, and it changes here. So you were fine.

[Laughter.]

Chairman MENENDEZ. Let me start off with a round of 5 minutes here.

First, I know that FHA has been providing energy-efficient mortgages as part of a national program since 1995. Do you have any sense of how that has worked and what we can learn from it?

Mr. SIMS. The amount of mortgages that are in that program were not sufficient enough for us to determine what the market would do at a greater scale, so we are still working on it internally and with other agencies to see what the underlying data would be. That is why we are doing studies right now to determine how both location-efficient mortgages would work as well as energy-efficient mortgages would work.

Chairman MENENDEZ. Well, one of our other panelists in the next panel is going to advocate in their testimony for incorporating

green incentives into mortgage calculations, which strikes me as a worthy idea.

Do you have any models as to how that can be done? Is there any view that HUD has about that?

Mr. SIMS. There are projects throughout the country that have done that. HUD is trying to internally work and see how you would build that in, for instance, our mortgage instruments, our insurance instruments. And we just need more data. We are looking at—it has worked in some places and failed in others, and I think what we are concerned about is the integrity of our fund and then how literally it takes us to scale, whether using appraisers, whether using mortgage—the financial industry, whether it is trying to determine what consumer preference is, which is why we like the commission and why we are undertaking lot of studies right now. When this gets implemented, we want this really to be effective. We look forward to the commission system because that commission can handle all of these issues, and we look forward to that report that would come out of the commission that is set forth in the bill.

Chairman MENENDEZ. I think this is a worthwhile endeavor, and I want to commend it to the Department's attention. It seems to me that if we can incentivize as part of the mortgage calculation the move toward green energy and efficiency, we can use the private marketplace as a way in which we can accelerate the pace of energy efficiency.

Let me ask you, in your testimony you describe a new $50 million energy innovation fund to pilot or test various strategies. Have you had the opportunity to see some of the most innovative strategies that show promise?

Mr. SIMS. The Notice of Funding Availability is going to be going out early this fall, and then we will be seeing some of——

Chairman MENENDEZ. That is your first round?

Mr. SIMS. That is our first round. And then we will be able to explore, obviously, the collective genius out there in America and their responses to our——

Chairman MENENDEZ. And then finally, HUD began its Green Initiative 3 years ago, which was a voluntary nationwide pilot initiative to encourage owners and purchasers of affordable multifamily properties to rehabilitate and operate their properties using sustainable green building principles. You write in your testimony that that led to the rehabilitation of approximately 2,700 units. What is your plan for continuing moving that in the future?

Mr. SIMS. We are creating a much more vigorous culture of commitment. Our goal is to—that is why we put it in the strategic plan. That is how we are going to measure our own performance as an agency, and we are measuring employee performance as well. It has——

Chairman MENENDEZ. Is the culture matched by any resources?

Mr. SIMS. The culture is matched—we have—we are applying across all of our programs on the green building side. We think it is really important. We realize that there are savings to us as a granting agency and there are savings to the people in that housing in terms of their own income.

Chairman MENENDEZ. Thank you. I have to go to an Energy markup briefly to offer an amendment. I would ask you, Senator Tester, if you are willing to chair for the balance.

Senator TESTER. Your wish is whatever I can do to help you out, Mr. Chairman.

Chairman MENENDEZ. I tell you, you are the man.

Senator Warner is next, and we will call upon him, and then Senator Tester. Thank you very much.

Senator WARNER. Well, thank you, Mr. Chairman, and let me start by thanking you and Senator Whitehouse and the others who have been involved in this effort. Also, Secretary Sims, it is great to see you again and thank you for what you are doing at HUD.

I wanted to give a quick statement here and then get to a question point. I am supportive of what Senator Whitehouse and Senator Menendez are trying to do in this overall green housing initiative. There is another piece of this whole mix that I know the Administration has been supportive of as well that I have been very involved in on the retrofitting of homes, what we are calling the Home Star Program. President Obama has spoken on that, and we also are trying to see if we can get that included in whether a larger energy bill or perhaps even in a small business or some of the other legislation that is moving forward.

As you are probably aware, that has got broad bipartisan support. It would be up to a 50-percent match using private sector distribution networks like the Loew's and Home Depots of the world to do the kind of energy efficiency that can be done either by a contractor or by a homeowner on their own.

I would like you to speak for a moment about within your not just new green building initiatives but within the retrofitting piece of what HUD is doing, what kind of experience you have had, obviously, with, as you describe, some of the examples in your old job in King County, taking communities that are usually a little more poverty-ridden, a little more challenging. But could you speak for a moment to HUD's retrofit activities already around this energy—around the green energy space?

Mr. SIMS. When I was testifying earlier about how we used our Recovery Act funds, much of that was recovery retrofit and weatherization, and I think at that time I was talking about the number of homes. I think we had 28,000 properties that were assisted housing, another 39,000. So we are a believer as an agency in the retrofit of properties, and we have seen, for instance, in Nashville the use of geothermal systems for heating. So we have been seeing a lot of innovation as we apply these funds, as we have coordinated ourselves with the Department of Energy as well on new investments. But I think it is—our experience, I think we would say, have been positive answers, and it has been incredibly positive, rewarding. That is why it is in our strategic plan, and that is why we have done such intensive work right now trying to figure out how we scale it up over a lot more of properties.

Senator WARNER. And this may not be your area, since I think on the—well, I am very optimistic and hopeful about the Home Star Initiative. My sense was, at least from some of the public press, and I think about in my own State in Virginia, some of the Recovery funds that were used in the weatherization program, it

has gotten some mixed reviews in terms of the spend-out, the hiring-up process. You may not be able to speak to this at this moment, but I would love to see some more current data on the status of the Recovery Act weatherization programs, because my concern is, you know, one of the good things, I think, about the Home Star Initiative is it appeared to be less bureaucratic than perhaps the classic weatherization programs that have been run through—I think about our old LIHEAP programs and others. But can you get me that data if you cannot speak to it right now?

Mr. SIMS. I can, yes.

Senator WARNER. All right. One last point, and my time remains but—and this is more—again, a question you may not have a full answer for. But we all know the value of green building. We all know the value of retrofitting. We can make the business case. What seems to be that we have not cracked the code on yet is if we are going to achieve the savings that I think we can point out on episodic instances, and if we can, as the Chairman was talking about, trying to get this incentive into the mortgage—get it into the base in terms of rental on Section 8 or a homeowner making a decision, we ought to be able to finance this. And I know there are communities—I think Senator Merkley from Oregon has talked about some of the things they have done in Portland. But is HUD looking at various financing models out there so that we could actually maybe use seed public monies, but if we create an appropriate baseline in terms of what normal energy consumption would be and we can demonstrate that the green building construction or the retrofit can actually deliver savings, there ought to be a way in partnership with the utilities—as we move toward renewable power standards and renewable utility standards that we should be able to finance this through public—through actually private financing rather than simply rely on public grant programs.

My sense is from the Chairman's earlier questions, you are looking at trying to get these modeling right. Do you want to speak to this whole notion of how we might be able to do more of a public–private financing on these efforts going forward?

Mr. SIMS. For the insurance that we provide through FHA, our issue is to make sure in the—we have an obligation to make sure that our fund remains—has reduced risk, and we have been asked to do that. We are also, at the same time, trying to determine how we adjust what we do with the market, because we don't want to take ourselves out of that market, either. So we are trying to look at how do you stimulate the private sector market to begin to look at energy efficient tools and location efficient tools, which is why I think we are doing such an—we want to make—we are trying to perfect—by working with the private sector, just how would we attract you to properties and use instruments that—basically where we could calculate energy efficiency, but how do you do that. We have both EPA and the Department of Energy with two tools that they are working with, and those have gone in the field on an experimental basis, as well.

So there is a great deal of work and we are trying to shepherd and integrate that work into what we can do at HUD at trying to scale it up very significantly, the use of energy efficient mortgages or location efficient mortgages. I am not answering your question

because of the fact that there is just a lot of churning, trying to get the right data so that we can say to the market, whether it is our insurance estimates or the private market, these work.

Senator WARNER. And again, my time is up, but I would just think that we should be able to get data that shows, here is what a home's energy costs would be without energy efficiency, whether in the construction or in the retrofit, and there ought to be an ability to have some of that to monetize that shared savings in the financing tool and find a way to really create, I think, a very, very valuable financing, private sector financing piece on sharing the savings with the homeowner or with the renter. And again, I would encourage the Department to look at those models.

Thank you, Mr. Chairman.

Senator TESTER. You bet. I want to thank you, Senator Warner, for your questions. I also want to thank Deputy Secretary Sims for being here.

I have got a few questions here, some pretty basic, actually. There are different levels of green, and I would assume that HUD—is there a certain level that you try to achieve as you push out programs?

Mr. SIMS. We use a—there is an Enterprise Green Community Standard is the one we are using at the present time.

Senator TESTER. And it compares building costs with savings? Is that what it does?

Mr. SIMS. Yes.

Senator TESTER. Is there a certain percentage you are trying to achieve?

Mr. SIMS. Twenty to 30 percent is what we have been able to accomplish so far.

Senator TESTER. OK. And that 20 to 30 percent, and I am just trying to get myself up to speed, the 20 to 30 percent is based on the amount of energy used, the amount of CO2 that is produced, the amount of build material that is used? Is all of the above? Is it measured by all of the above?

Mr. SIMS. It is pure energy use.

Senator TESTER. Pure energy use? OK. And so are there standards that are set up—say I am building a brand spanking new house and I want to build it green and save 30 percent. Are there standards that you use as far as the construction of that house, whether you use two-by-six walls or two-by-four walls or the number of windows and all that stuff? I am just trying to get my arms around what the definition of green is, and I understand the energy use, but if I am building a house and I want to say to myself, I want to achieve 30 percent minimum. If I get more than that, it is great. Are there standards that HUD looks at? When you are doing public housing, for example, and you want to achieve that, is there a place you go for those standards?

Mr. SIMS. There are no—most of the standards that we have to build to are local building codes.

Senator TESTER. Got you.

Mr. SIMS. What there are is a great deal of literature out there talking about how you can achieve efficiency. It may be the source of energy use. For example, if you use geothermal, that creates efficiencies.

Senator TESTER. Got you.

Mr. SIMS. Double-pane windows, we know, work. I saw a system in Hawaii, which is a very expensive place for energy consumption, where they were using pressurized devices. So I think there isn't a specific set of standards that are out. There is a lot of literature. There is a lot of work being done, a lot of engineering design, whether it is material use, whether it is the flow of temperatures in your homes——

Senator TESTER. Got you. And it——

Mr. SIMS. ——appliances you use.

Senator TESTER. And it may be beyond the purview of HUD to disseminate that information. That is probably done by the DOE or a Department in there.

I want to talk a little bit about rural *versus* urban.

Mr. SIMS. Yes.

Senator TESTER. It is an issue that, whether we are talking about housing, health care, whatever it might be, there are different challenges out there. What do you see as the challenge in providing green housing from a HUD perspective in rural America *versus* urban America, and there are challenges on both ends of that.

Mr. SIMS. We just have begun to explore that. We have been meeting with the Rural Policy Institute to actually get a better appreciation and understanding of both rural housing and then rural activity centers or small cities in rural areas to see how the housing would look, designed, and as soon as we can provide—we know that with any structure, we can get those efficiencies, no matter where they are at. The issue is how do we finance those? Is it going to be by grant, utility savings? Are there opportunities present in rural areas that are not present in urban areas? For instance, can you augment your energy source with wind, with deeper wells?

Senator TESTER. Yes.

Mr. SIMS. So we are trying to—that is why, and not to avoid the question, why we are doing so much homework now——

Senator TESTER. Yes.

Mr. SIMS. ——because it isn't a single answer. The issue is how would we, as a Federal agency, and along with our partners, USDA, approach rural areas, how would we do the urban areas, and we are trying to work through that now.

Senator TESTER. Right. Well, along those lines, I will just tell you that I think there is—all of Montana is rural, all right. But in the more urban centers of a rural State, I honestly think we are going to see some out-migration into real frontier areas. We are already starting to hear words of it, or thoughts of it, because housing, land costs are less and there are quality of life issues that people want to take in. And so the urban *versus* the rural/frontier areas, I think are going to become more of an issue as we move forward.

A last question before I turn to Senator Reed. Is there any coordinated efforts between you, speaking of rural, HUD, and outfits like the USDA Rural Housing, given that they deal with rural? Are you able to cut those silos down and work across those lines? Has that been approached yet?

Mr. SIMS. Senator Tester, yes, it has been.

Senator TESTER. Oh, good.

Mr. SIMS. We had a meeting with their staffs. They are convening and we are creating work groups, including with our Sustainability Office working very closely, because our Sustainability Office is the one pushing green housing.

Senator TESTER. Very good.

Mr. SIMS. That is why I was saying earlier we are merging our interests.

Senator TESTER. Kudos to you on that. I think you get more synergy, a better program the more you can work together to get on the same sheet.

With that, Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman, and thank you, Mr. Secretary.

Just a quick question, and it follows on to the discussion with Senator Warner. One of the aspects of the Recovery Act that seemed to go extremely well is the public housing use of funds for weatherization. First, do you have statistics showing what they did, and importantly, how much they will be saving over the course of the next several years, because there is nothing better to argue for programs like this if you can say that this has saved housing authorities significant monies.

Mr. SIMS. We have so far done 39,000 units. Our hope is to go up to 159,000 units. The program has worked incredibly well. The local housing authorities who we are working with have been talking about their energy savings. We are now going back and getting all that data and collecting that data so that we can actually quantify it. We still believe it is going to be in the range of 20 to 30 percent savings per unit.

Senator REED. Once you get that quantified data, and again, this echoes what Senator Warner was talking about, it would seem that you could use those savings to amortize loans to further complement your efforts so that we could move very aggressively and perhaps move to increase your goal even more than it is now. Is that what you are planning to do?

Mr. SIMS. That is what we are going to try to do, but we have to do that in coordination with our housing authorities who are the grant recipient agencies, and I think many of them are doing that, as well, looking at how do you lower the cost of your tenants and then how do you grab any savings you have—for instance, in Nashville, which I remember walking through their program with them, they believe the savings are so significant that they can put their units into an export into the utility as a generator, which would be—and they would accrue the revenues from the sale of that because of the efficiencies they have gained so far.

Senator REED. The ARRA money will run out.

Mr. SIMS. Yes.

Senator REED. How are you going to keep the momentum going? Since this is something that seems to be a win-win in so many different ways, lowering costs of Public Housing Authorities, which they need to save every nickel they can, lowering consumption of energy, employing people to go in and do this work, which can be done by Americans in America, how are we going to keep this going?

Mr. SIMS. We are building it into our grants, so that if you are going to be a recipient of any of our grants on the housing side, we expect to see energy efficient homes.

Senator REED. Just a final point, which is the less successful part of this, from my perspective, was the weatherization of private residences because of many factors, but one was licensing and qualifying the workers. There was some confusion. Again, this seems to be such a win-win. Where are we on that? Are you making progress? Have we resolved things?

Mr. SIMS. We are making progress. It is a multi-agency task on how do you qualify people, how do you train people, how do you license them, how do you get them into the homes, but there has been an incredible effort to do that, whether it is targeting people who we have in our public housing under Section 3 who we want trained and moving into that field, whether it is now coordinating with the community colleges that have accredited training programs, whether it is working with the unions who can certify. So there is a pretty substantial effort right now to create what we call the qualified labor force to be able to go ahead and do those homes.

The reason why it is so important is because we find out that people who hold the mortgage instruments and people who insure them want to know who is doing the work so that they can certify the value of the work done and determine through various modeling the efficiencies gained.

Senator REED. Well, thank you, Mr. Secretary. I just think these are programs that have so much further potential and benefit that we have to get them right in terms of deploying them effectively. And then once the Recovery Act money runs out, we have to make a good case here in a tough environment for additional funding. The facts, the figures, the savings, the work, the people that are employed, all that is going to be absolutely vital to us and we are counting on you providing it.

Mr. SIMS. Thank you, Senator. We have been at this at the Federal level seemingly less than a year and we are—there are some quarters where we might be considered to be irreverent in our approach. But our goal is to say that it is important to have energy efficiency because that is going to be a source both of energy in the future, jobs in the future, lower cost savings to the people in those homes, and we think it is a win-win-win-win. It is trying to move what I always call the substantial processes within the Federal Government to get there. It requires a lot of work, a lot of lawyering, a lot of economists, a lot of road changes, and we are very, very focused on that.

HUD as an institution, as a Department, we believe in green. We believe in green building. We believe in energy efficiency and we have built it into our strategic plan, which we will measure our employees, our offices, and our own performance, and we adopted that policy. And we are also saying that it has to be a policy that lifts all boats. It cannot be you can get one performance out of the homes of the affluent. That is really, really easy. Our issue is making sure that middle class and lower-income people can also win. So we are trying to take this to scale.

But when we come back here, we want to be able to say that we took it to scale and it worked because we were very exhaustive and

very thorough in our preparation, which is why we have commissioned so many studies to get so much data to find what really, really works. We don't want to chase a good idea. We want to chase success, which is why we are being thoughtful, but we are working at a very high speed to accomplish it.

Senator REED. Thank you.

Mr. SIMS. Thank you, Senator.

Senator TESTER. Thank you, Senator Reed, and I want to thank you, Deputy Secretary Sims, for being here. We are going to move to the next panel, but I will just say this. This is the low-hanging fruit. It is a win-win-win-win situation, and with some minor costs up front, increased costs up front, you are right, it will pay back for years and years and years and years and years. So the work you do is critically important, especially for the middle class and the poor folks in our economy. We wish you the success in the world and we offer you our support as you move forward. So thank you.

Mr. SIMS. Thank you, Senator Tester. When I was younger, I actually worked in your State. I was working for the U.S. Forest Service in Eureka, Montana, and I have a friend that went to Montana State, another one that went to the University of Montana.

Senator TESTER. That is pretty darn nice country up there.

Mr. SIMS. It is beautiful country.

Senator TESTER. You were there. All right.

Mr. SIMS. Thank you.

Senator TESTER. Thank you. Thank you, Deputy Secretary.

Our next panel, and if they would come up, I will kind of announce. Mr. Dave Caldwell, Ms. Trisha Miller, and Mr. Kenneth Gear. I will make the introductions as we go forth.

Dave Caldwell is Vice President of Caldwell and Johnson, a North Kingstown, Rhode Island-based home builder. Mr. Caldwell holds a LEED Accredited Professional designation, the Certified Green Professional designation, is a green verifier for the National Association of Home Builders Green Building Program, and is an instructor for the Certified Green Professional Program through the NAHB University of Housing. He serves as a Director of the Rhode Island Builders Association—he is a busy guy—and is active in the Rhode Island Chapter of the U.S. Green Building Council.

From 1998 to 2006, he served as a commissioned officer in the United States Marine Corps. We appreciate that. And he is a veteran of Operation Iraqi Freedom. It is great to have you here, Dave.

Ms. Trisha Miller serves as Deputy Director of the Green Communities Initiative at Enterprise Community Partners, a national nonprofit that is the leading provider of capital and expertise for affordable housing and community development. Her work focuses on leveraging private and public investments in green affordable housing development and sustainable building practices across the country.

She manages the Green Communities National Grant Program, which provides over $1 million annually for planning and construction of green affordable housing. We appreciate your work and it is good to have you here, Trisha.

Kenneth Gear is Executive Director of Leading Builders of America, a trade association of the Nation's largest home builders that builds approximately one-third of all new homes in the United States. Prior to joining Leading Builders of America, Mr. Gear was Vice President of—I hope I pronounce this right—Pulte Homes, the largest home builder in the country, and served on their Energy Committee.

We absolutely appreciate you being here, Mr. Gear, and all three of you. We look forward to your testimony and the questions that will follow thereafter. Your entire testimony will be in the record, and we will start with you, Mr. Caldwell.

STATEMENT OF DAVID CALDWELL, JR., VICE PRESIDENT, CALDWELL AND JOHNSON, INC.

Mr. CALDWELL. Good morning, Mr. Chairman, Members of the Committee. Thank you for offering me the opportunity to speak on behalf of the merits of green housing and in particular the Energy Efficiency in Housing Act of 2009. My name is Dave Caldwell, Junior. I am a second-generation home builder from a small family owned construction company in Rhode Island and a recent Marine Corps veteran of Operation Iraqi Freedom.

Recently, our company completed the first Department of Energy Builders Challenge Home in Rhode Island, which is a complete gut remodel of a foreclosed and abandoned home built in 1952. There is the finished product. For an additional $5,000 in construction costs, we were able to more than double the energy efficiency of the house. The house was built entirely on speculation, three bedrooms, two-and-a-half baths, 1,300 square feet. It sold for $265,000, which is about 15 percent below the median in North Kingstown. It was a single mom, a friend of the family, who bought it with two daughters. She is a school teacher and enjoys living there, happy to show the place off if you want to stop by.

Interestingly enough, we had a lot of press and we had a lot of people very interested in the concept of buying a home like that. We had an open house. We had overwhelming response. We had about 200 people through there in the course of 2 days.

The principal value proposition is that extra $5,000 in construction costs, if spent to double the energy efficiency, amortized over 30 years on her mortgage, is about a dollar a day. The documented energy savings by the Department of Energy, which is this next sheet here that the DOE certified, it is about two dollars a day. Assuming that mortgage stays fixed for 30 years, and I think it will with the low rates, that gap is going to increase substantially as the cost of energy rises. Once again, the homeowner will receive approximately double the value in energy savings that the green features of the home will cost over time. I think that is a return on investment that should appeal to everybody.

In Rhode Island, there appears to be significant demand for this type of home, but neither the mortgage industry nor the appraisal community is at this time willing to assign any additional value to homes built to greener energy efficient standards. It makes appraisals and financing very difficult for that little bit of green premium, particularly those applying for FHA mortgages with low down payments.

Not one person who has seen this house has disagreed with the value proposition for the homeowner created by its increased energy efficiency. However, the overwhelming focus of the financial community, the real estate community, and the appraisal community is purely that extra $5,000 figure for the cost involved, not the operational savings and value for the homeowner that has been created.

Presently, I have a customer who is designing an energy efficient custom home. When he went to the bank seeking financing for the loan, which he is well qualified for, he explained all the attributes of the green housing, the photovoltaics, the energy efficiency, the bank basically said, we don't care about any of that. It is just added expense—literally. I talked to the mortgage originator, who I know, a very competent person and a very good bank. They don't think it matters. They assigned no value to that.

I am frequently asked why more houses are not being built similar to the green home we constructed, and I like to use this analogy when I talk to customers. Customers purchasing a car, when they see two cars on a car lot that look identical in every respect, like the picture there, and they don't know anything else except the fact that one car costs 2 percent more than the other, they are going to make a decision based on cost and pick the cheaper car. But if you tell them the car that costs 2 percent more gets double the gas mileage, intuitively, everybody is going to assume right off the bat that that is the better bargain, and the customer understands that. It is that easy. It is that basic.

Today, consumers are provided with considerably more information when they purchase a car, a box of cereal, or a cell phone than they are when they purchase a home, which is usually the most significant and major purchase they are ever going to make. As such, I am very much in favor of the incentives for green housing, specifically the ones in the Energy Efficiency in Housing Act, S. 1379. I have met no one, and I mean no one, who does not believe that energy efficiency in housing is not a great idea. I have met no one who would not be willing to spend a dollar a day to save two dollars. It can be done, and I think it should be done. There is no reason not to. I don't know why anyone would build a new house any other way. I really don't.

The question, then, is why we are not doing this. I think the incentives and guidance of the Energy Efficiency in Housing Act will be a tremendous help to both homeowners and small businesses in facilitating the shift toward more sustainable and efficient housing stock. This is an outstanding example where Federal leadership can synthesize a true win-win situation for businesses and homeowners.

Thank you again for the opportunity to testify and I am happy to answer any questions.

Senator TESTER. Thank you, Mr. Caldwell, and we will have some.

Trisha Miller, you are up next.

STATEMENT OF TRISHA MILLER, DIRECTOR, ENTERPRISE GREEN COMMUNITIES, ENTERPRISE COMMUNITY PARTNERS, INC.

Ms. MILLER. Thank you, Chairman and Members of the Committee, for the opportunity to testify on the Energy Efficiency in Housing Act introduced by Senator Whitehouse. I am Trisha Miller, Director of Green Communities at Enterprise Community Partners. Enterprise is a national nonprofit organization with the mission to see that all low-income people in the United States have the opportunity for affordable housing.

Since 1982, we have invested over $10 billion in States, including Montana and New Jersey, New York and Louisiana, to create over 270,000 units of affordable housing. Through our Green Communities Initiative, Enterprise provides funds and expertise to enable developers to build and maintain housing that is healthier, more energy efficient, and better for the environment without compromising affordability. Our Green Communities criteria, which you heard Deputy Ron Sims discuss earlier, is the first national framework for environmentally sustainable homes.

Mr. Chairman, now is the time for Federal leadership on green housing. The Government has an essential role to play in linking the benefits of an emerging green economy with low-income individuals and their communities. Green development offers a cost effective way to address our housing challenges and the rising costs of energy, water, and transportation.

Despite recent declines in home prices, the Nation faces a huge shortfall of decent, affordable housing. Nationwide, an estimated 55 million Americans are living in overcrowded or substandard housing. Green, affordable housing gives us the ability to reverse this trend.

The Energy Efficiency in Housing Act and the Green Act represent a major step toward that goal and we commend Senator Whitehouse and Representative Perlmutter for their commitment and leadership in introducing these bills, which Enterprise enthusiastically supports.

National legislation would have positive impacts on the housing market and especially the affordable housing sector. Mr. Chairman, housing and transportation costs make up the largest share of our household budgets and quickly force low-income families in the untenable choice between life's most basic necessities. A low-income household will pay four times as much of their monthly household income as the average American to keep apace with the rising utility costs.

There are roughly 25 million Americans with annual incomes of $25,000 or less in the country. For these families and individuals, the daily realities of rising housing, energy, and transportation costs are intertwined and they are simply crushing.

Not surprisingly, high utility costs force low-income families to make desperate tradeoffs. A survey of households that receive Federal Home Energy Assistance during a 5-year period found that 47 percent of those surveyed has to miss—went without medical care, and 25 percent missed a monthly payment on rent or toward their mortgage. Twenty percent in the survey went without food for at least 1 day in order to keep apace with these rising costs. And

these are not mere statistics. They are real families who continue to live on the edge.

The Energy Efficiency in Housing Act signals a comprehensive approach to green housing that will bolster community and environmental benefits and save families money on utility bills without imposing significant costs on the Federal Government.

There is also emerging evidence that green homes are healthier homes. A targeted study recently assessed the health impact on asthmatic children who moved into health public housing in Seattle's High Point community. After just 1 year, the results were staggering. Children showed a 60 percent increase in symptom-free days and a 67 percent reduction in their trips to the emergency room or other clinical care facilities.

The Energy Efficiency in Housing Act can not only improve health outcomes, it can protect our natural resources and fight climate change. Just imagine if we could rehab the 25 million units of homes that house our lowest-income citizens. Using EPA's equivalency calculator, that would translate into savings of 60 million tons of carbon dioxide removed from the atmosphere, ten million cars taken off the road, or nearly 400,000 acres of forest preserved each year.

One of the hallmarks of this bill is that it would provide new Federal resources for green housing through incentives to publicly financed and assisted housing developments on an unprecedented scale. The bill also provides resources to enable private developers to achieve green goals cost effectively.

One especially important provision would provide funds to strengthen the capacity of community-based organizations in green development. The bill would also spur green public housing by requiring that all HOPE VI construction comply with the mandatory aspects of our Green Communities Criteria.

Mr. Chairman, this isn't just about the environment. It isn't just about housing. And it isn't just about healthy living. It is about families who are struggling to find jobs, to keep the lights on, and to continue to make their monthly payments. This is a critical step and we urge Congress to enact the Energy Efficiency in Housing Act.

Thank you, and I look forward to the opportunity to take some questions.

Senator TESTER. Well, thanks for your testimony, Trisha. I appreciate it, and it is a no-brainer when you think about it, no pun intended.

Mr. Gear, you are up.

STATEMENT OF KENNETH GEAR, EXECUTIVE DIRECTOR, LEADING BUILDERS OF AMERICA

Mr. GEAR. Thank you, Senator Tester. My name is Ken Gear. I am Executive Director of Leading Builders of America. We are relatively newly formed association representing 16 of the Nation's largest homebuilding companies. In 2009, our members sold approximately one-third of all new homes sold in the country.

LBA member companies are building green homes every day throughout the country and have been active participants in vol-

untary energy efficiency programs like Energy Star, The Builders Challenge, and Environments for Living.

We are not made up of sort of niche green builders; rather, we are mainstream builders who all have a variety of different business models, but who are all committed to building an energy-efficient future.

Our members are on the front lines of this effort and recognize the important role that housing can play in reducing energy consumption in the United States.

We have jointly developed a plan along with the Institute for Market Transformation with significant input and support from the Alliance to Save Energy and the Natural Resources Defense Council, and we thank you for the opportunity to share our collective thoughts today.

We commend Senator Whitehouse as the primary sponsor of the Energy Efficiency in Housing Act, and we are pleased to see that that bill recognizes the need to help homeowners finance the incremental up-front costs associated with purchasing highly efficient new homes by providing energy-efficient mortgages and appraisal enhancements.

We have a few suggestions to further this objective so that energy-efficient mortgages can be universally available in the marketplace, which is critical to its success.

We propose to provide Federal mortgage agencies with the tools and direction necessary to improve the accuracy of mortgage underwriting by accounting for energy costs associated with operating the home for all new mortgage loans.

With a better, more granular assessment of whether the homeowner can manage the cost of hospital, Federal mortgage programs will produce better quality loans for better informed borrowers. It will lead to more efficient homes being built and a reduced risk of mortgage default and will more accurately account for whether the borrower can afford the cost of homeownership or not.

The policy can be implemented in a manner that will not reduce the availability of credit or increase the cost of credit, and over time the people should make energy-efficient homes more affordable which will result in increased consumer demand and more green jobs.

One of the first steps in the underwriting process for any loan is calculating the cost of ownership. This analysis typically involves summing the total of annual expenses for principal, interest, taxes, and insurance premiums. Conspicuously absent from this calculation is the anticipated annual energy cost for operating the home, and that cost is actually larger on average than taxes and insurance.

We suggest adding an "E" for Energy to be added to the PITI calculation for all federally backed mortgages, and this would have two immediate and substantial benefits. First, the quality of mortgage underwriting would improve with the addition of energy in factoring the cost of homeownership. And, second, the change would encourage consumers to buy more energy-efficient homes by allowing energy savings over the life of the home to be used to offset the up-front cost.

We would urge the Senate to include these changes in any bill before any proposed energy mandates would go into effect, and there are a few pending in the energy bills that are pending out there. Our analysis shows that a 30-percent mandated increase in energy efficiency would cost the typical new home approximately—would increase the cost of a new home by approximately $5,000, and at a 50-percent level, it goes up to $15,000, and that varies significantly by climate zone. So unless we have a strong energy-efficient mortgage program in place and available throughout the country, the mandates will cause homebuyers to be unable to afford or obtain financing to cover the extra up-front cost, making them less likely to purchase the more efficient home.

For this plan to work, we must adopt an accurate and universally understood method of measuring and valuing energy efficiency. Today buyers and builders typically realize no value, as Mr. Caldwell said, for including energy efficiency features in a home, even though they cost significantly more. We propose a rather simple solution by using a Home Energy Rating System, or HERS rating, which is a well-established and universally accepted energy efficiency standard.

Using a HERS system to measure the efficiency of the home allows one to determine the expected energy usage of the home without placing a burden on home appraisers to place subjective values on energy-efficient features. The HERS system will give you an estimate of the expected monthly energy savings based upon a performance test of the home done by a third-party, certified energy rater. The net present value of those monthly savings can then be factored into the underwriting process to help finance the additional up-front costs. And for homes that have not been rated, an average energy cost as determined by DOE would be the default for underwriting purposes. So the system would not penalize unrated or presumably less efficient homes. It would just provide a benefit to more efficient homes.

So, in conclusion, I think I would just leave you with a prospective homebuyer interested in energy efficiency should be facing a win-win situation. An energy-efficient home is good for the environment, and it will save money, and the incentives and the changes that we are proposing would make energy-efficient homes and features affordable and it would allow buyers to finance them.

So, with that, I will look forward to your questions.

Senator TESTER. Well, thank you, Mr. Gear. I appreciate your testimony also as with the two preceding participants.

I really do not know where to start, so we will start with a question for both Mr. Caldwell and Mr. Gear. It deals with an issue that you were just talking about, Ken, about prospective homebuyers, and almost without exception, when somebody is going to buy a house and they can get the financing for it—the house is already done, it is already buttoned up, they cannot see what is behind the sheetrock, they cannot see what is behind the siding, they can see if it is double-pane or triple-pane windows or whatever it might be there—how—and like every one of you said, everybody wants to save some bucks. The example that you gave, Mr. Caldwell, five thousand bucks up front, $2, DOE, $2 a day, that is 21 grand. I mean, that is a pretty good return on investment. So

we want it, but we want to make sure we get it. How does the homebuyer know that when the place is buttoned up, it is done, it looks beautiful, it is painted well, it has got a nice yard, but what is under the skin is what is really important, how does the homebuyer know that? Are there agencies out there that you certify with right now? Because it is all voluntary at this point, correct?

Mr. GEAR. It is all voluntary, and right now there are energy raters that can actually go in and do that.

Senator TESTER. Who are they?

Mr. GEAR. There are various—that is the HERS rater I was talking about. There are different agencies and companies that go out for——

Senator TESTER. So I have got a 1,500-square-foot home, and I want to have it HERS rated. What State are you from, Mr. Gear?

Mr. GEAR. Virginia.

Senator TESTER. Virginia? How much would it cost additional for that?

Mr. GEAR. It is roughly $300.

Senator TESTER. Three hundred bucks?

Mr. GEAR. Yes.

Senator TESTER. Is it based on square footage or just it is about 300 bucks——

Mr. GEAR. No. They physically test the home. It is roughly 300. It varies a little bit.

Senator TESTER. OK. And then they will come back and tell you what the savings is on that?

Mr. GEAR. Correct.

Senator TESTER. OK. Mr. Caldwell, would you address that as far as, you know—and is HERS used a lot? In what percentage of the homes are they used? Or is there a different method? Go ahead.

Mr. CALDWELL. In Rhode Island, which is my State, there is a nonprofit called Conservation Services Group funded by the local utility. That will do a baseline analysis for free.

Senator TESTER. Good.

Mr. CALDWELL. There is also a nonprofit called Rhode Islanders Saving Energy. You can call them. They will come to your house for free, change some light bulbs. Beyond that, you will spend a little bit more to evaluate the building performance test of the house through a recognized national standard through DOE. But it basically involves a series of performance metrics. You will probably hear the words "Blower Door" test. They will try to figure out where the leaks come behind the sheetrock. They use thermal imaging cameras that will look behind the wall. That will tell you where your heat loss is. It is a pretty neat tool.

So the tools are all there, and it is not that complicated, and the software packages are there—it is called ResNet—that they use to come up with this document right here.

Senator TESTER. Well, good. Trisha, do you want to respond to that at all?

Ms. MILLER. Sure. We tend to see projects that are single-family and under four stories use the HERS index, and that is benchmarked against the Green Communities Criteria for projects of that scale. I also just wanted to cross-reference Energy Star, which allows you to go through a full certification, and the Energy

Star certification requirements, guidelines, are also incorporated in the Energy Efficiency in Housing Act. So we see an opportunity to really take what we have learned across the country and get to scale in the affordable housing sector using HERS and then also using ASHRAE for larger-scale projects, multifamily, high-rise.

Senator TESTER. OK. I am not a banker, but if I was a banker and somebody came in to me and said we are doing these energy savings and there was documentation that this was actually going to save you some dough—might have the builder with me, might have somebody from one of those agencies you talked about, Mr. Caldwell—I would think it would be a no-brainer to give them the extra dough.

What do we have to do to break through that, you know, it is just additional cost and we do not care?

Mr. CALDWELL. I am not a banker, either, so I am not particularly qualified to answer that, but I can tell you this: From a pure human perspective, FHA does have energy-efficient mortgage programs on the books. They are good. The banks will not use them for the following reason: that it is a lot more work for the underwriter and the appraiser to make the same commission. They are all directly endorsed, the lending institutions. When someone gets an FHA mortgage, they do not go talk to FHA. They go to the bank or the loan company. I have had that discussion with them. They say this is too much work, just put them in a regular loan, they are qualified, or, you know, we will make something else work. That is kind of it.

So I do not know the answer to that, but some of the incentives with mortgage insurances, rate reductions, fee reductions, things like that, and, again, the data to get this thing rolling, I think you would be OK.

Senator TESTER. It would just seem to me that it makes just too much sense to say—you know. The other side of the coin is—and I was wondering, and I will get back to you in a second, Trish, but either Mr. Gear or Mr. Caldwell, what—when your builders are building a house or you are building a house, Mr. Caldwell, there is opportunity to save money, too, in building costs. I mean, you know, if you are in Montana, do not put that window on the north side of the house. You know, put that money into insulation somewhere else, and you have killed two birds with one stone.

Are those the kind of things you talk about or that the certifiers talk about with you? And you have said—I mean, you build a large percentage of the homes in this country.

Mr. GEAR. Correct. Yes, those are sort of the easy, low-hanging fruit, if you will. When you want to get to even higher levels of efficiency, it requires extra features in the home, you know, HVAC systems or air-conditioning systems that use lower efficiency. So when you get into those costs and the appraisals do not recognize that extra money you put in, therefore the banks will not finance them, it creates a disincentive to go that extra mile.

Senator TESTER. Let me ask you, does the White House bill take care of the appraisal problem?

Mr. GEAR. We would like to see them go a little bit further, but, yes, it appears—it is on point for the issue. We have a little few tweaks, but, yes, it addresses the issue.

Senator TESTER. OK. Mr. Caldwell, do you have any further—OK. Good enough.

Trish, I want to ask you about rural *versus* urban because I am a rural guy. Is there a difference in challenges out there between rural and urban when it comes to green building? And if there are, what are they?

Ms. MILLER. Sure. That is a terrific question, and we have a rural and Native American initiative and enterprise that I work closely with to address some of those very challenges.

Senator TESTER. And housing is a huge issue.

Ms. MILLER. Exactly. So you have—I think when you raised the question of how do you find a HERS rater in Montana, just getting the right technical assistance and support onsite for projects can be a real challenge in more isolated rural communities. But we have seen—in Montana we work with a nonprofit called Homeward that has built over three affordable housing developments using the Green Communities Criteria. They have made the case that this can be done.

Senator TESTER. And do great work, by the way.

Ms. MILLER. Terrific work. So we are following the example of what rural developers are able to achieve using the Green Communities Criteria and incorporating, you know, their guidance and lessons learned as we provide more technical support through our Green Communities network of TA providers. And I think one of the tremendous assets of this bill is that it addresses targeted capacity-building grants for projects in rural communities that could take advantage of some of the expertise we have learned in the industry for the last 5 years.

Senator TESTER. OK, good. Well, I want to thank all three of you for being here. I very much appreciate your presentations and appreciate your work. It is good, it is very, very good work, and we have just to figure out ways to help you make it work even better.

With that, I am going to turn the gavel back to the Chairman, Senator Menendez.

Chairman MENENDEZ [presiding]. Thank you, Senator Tester, and thank you for chairing for the period of time.

I did not get to hear your testimony, but I read it, so let me pursue it. Mr. Gear, some of the members of your organization, the Leading Builders, include some of the largest home developers in the Nation. And the home construction industry suffered through some of the most difficult times in the recession, and the sector still has a large unemployment rate, about 20 percent.

Would the enactment of green housing initiatives such as those that we have discussed today, the GREEN Act and the Energy Efficiency in Housing Act, help to stimulate home construction, do you believe?

Mr. GEAR. Yes, there is definitely a pent-up demand out there for green homes, and what the bill would do, it would allow homebuyers the opportunity to help finance a greener home. And if the home is greener, it is going to mean there is more features in the home which will require putting people back to work to install them and get those features installed in the homes. So, yes, it would definitely be a boost to an industry that, you are right, is hurting right now.

Chairman MENENDEZ. Now, part of what your testimony talks about, it incorporates—seeking to incorporate green initiatives into mortgage calculations, which strikes me as a worthy idea. Are there any models for how this can be done?

Mr. GEAR. Fannie and Freddie, I believe it was Fannie Mae had a model that they had a few years ago that actually was—the architecture was there, and it worked quite well. The reason it did not get to scale was because, as Mr. Caldwell said, it was a program that required a little bit more work from the banks and the underwriters. And at the time, credit was free flowing in the economy, and nobody needed a green mortgage. Today they do, which is why we think it is so important that this not be a pilot program, that it be to scale available to all consumers.

Chairman MENENDEZ. So what do you think are some of the practical obstacles to implementing that?

Mr. GEAR. Well, I think, you know, our analysis has shown that it would require certainly a software upgrade to the underwriting systems that FHA and Fannie and Freddie use, essentially just adding sort of a line on there, on the analysis to show so you can input what the monthly savings would be, the net present value of the monthly savings, and that would allow the borrower increased borrowing capacity to finance the energy-efficient features.

So we do not think it would be too much work to do that, to implement it and get it up to speed within 12 months.

Chairman MENENDEZ. Ms. Miller, your enterprise provides financing for affordable housing. What are the unique challenges that affordable housing faces in terms of achieving energy efficiency?

Ms. MILLER. One of the challenges that we find affordable housing developers face in the market is going green for the first time, so making that early transition to using the Green Communities Criteria or equivalent green rating systems. And we have been providing technical expertise and support through the forms of predevelopment loans and grants to help affordable housing developers address some of those challenges, just thinking differently about everything from the building envelope to active systems incorporating renewable energy or getting to—in Green Communities Criteria we have a 15-percent above code minimum requirement that they can achieve at very low cost, but it requires a new approach to design, and the integrated design process is something that we have been advocating for and provide charrette grants to allow the development team to come together and think about what are the cost-effective means to achieving those energy efficiency goals and have seen tremendous success with that, starting early in the design process to reach those targets.

Chairman MENENDEZ. You talk about the challenges sometimes that lower-income people have between paying their utility bills and dealing with medical care or food. You have invested about $700 million——

Ms. MILLER. We have.

Chairman MENENDEZ. ——to create green affordable homes in 32 States. Have you been able to quantify a difference in people's lives as a result of it?

Ms. MILLER. We have been able to quantify the direct pocketbook savings that low-income renters and homeowners benefit from as a result of meeting the Green Communities Criteria. We have seen a 20- to 30-percent savings in terms of lower utility bills from energy efficiency upgrades and water conservation measures. I referenced earlier the Seattle High Point project where we able to commission a study to quantify the health impacts which are often intangible or harder to get hard numbers on, and we found that for children with respiratory ailments a dramatic reduction in terms of symptom days and trips to the emergency room. So we continue to look at both the pocketbook savings and the health benefits that are achievable for low-income families.

Chairman MENENDEZ. Thank you.

Mr. Caldwell, I understand from your testimony that a mere $5,000 in construction costs on a home that is sold for $265,000 is able to double the energy efficiency of the house.

Mr. CALDWELL. That is correct.

Chairman MENENDEZ. That is a 2-percent increase in cost. That should seem an enormous attraction to anyone if they are just doing the math.

Mr. CALDWELL. True. I brought a few props with me. I am glad you asked. But this is basically how you do it: a little bit of exterior rigid insulation on the outside of the house, a little bit of—this is a water-based foam. You can eat it. I do not recommend it, but that was part of the project pitch from the salesman. I made him eat a little bit, so I can testify that that is not harmful foam. But it is called Icynene. It is a water-based foam.

To make a long story short——

Chairman MENENDEZ. We will get you out for lunch time so do not get overeager.

[Laughter.]

Mr. CALDWELL. But that is pretty much it right there. That is about a thousand bucks extra to install this on the house, and it is about 2,500 bucks to use this instead of fiberglass. And that is pretty much 90 percent of it right there.

But as Ms. Miller said, you have to start with a design. You have to think a little differently. You have got to rethink the entire process. But if you do that—and we continue to move forward with a few more projects in the pipeline as to how to make the houses more efficient and also make them less expensive. This is our business model, so this is not just a pure pie in the sky, theoretical concept to me. This is the actual way we are focusing our business right now, is to how to continue to build a few more of these. We have got two more breaking ground this summer that are going to be built to the same house but built a little differently. We are using a different methodology. This is literally, you know, how I make my paycheck by doing this type of stuff. So I have an extreme vested interest in making sure this runs well, especially to my Dad, who is writing the checks, you know, watching me quite closely.

So that in a nutshell, very briefly, is how you would do that.

Chairman MENENDEZ. So is that attracting buyers for you?

Mr. CALDWELL. Absolutely. If I had 20 of these houses, I would have sold all 20 of them. No joke. Once the buyer hears that, it

does not take a genius to figure out that this is a good deal, if it is in all other respects a nice home, well built, nice location, and all those other things.

Chairman MENENDEZ. Well, thank you all very much for your testimony. I think you have helped us move forward on making the case for energy-efficient housing and what are the benefits that would be derived, environmentally certainly but also in terms of jobs and cost savings for Americans that are on tight budgets. So I hope we will mark up and pass the Energy Efficiency in Housing Act here in the Senate as a good step in the right direction. We appreciate your testimony.

We are going to keep the record open for 2 days. Should any Members have any questions of any of our witnesses, they will be able to do so. And with that, this hearing is adjourned. Thank you very much—I am sorry. I take it back. We are going to have 1 week for our Members to submit questions. So if you get those, we would urge you to answer them as soon as you can so we can close the record and be able to hopefully move forward.

With that, the hearing is adjourned.

[Whereupon, at 11:20 a.m., the hearing was adjourned.]

[Prepared statements, responses to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF SENATOR SHELDON WHITEHOUSE

Chairman Menendez and Members of the Committee, I thank you for the opportunity to speak this morning and for holding a hearing to examine proposals to encourage energy efficiency in the housing sector, including my Energy Efficiency in Housing Act. I also want to thank Representative Perlmutter for leading the way on this crucial topic. He has succeeded in shepherding green housing legislation through the House and has been one of the leading champions of energy efficiency.

I also want to acknowledge Dave Caldwell, on the third witness panel, who has led pioneering efforts in green building in Rhode Island, and has travelled down to D.C. to share his experiences with us.

I hope that this hearing will make clear that energy-efficient housing connects tackling climate change and reducing our dependence on foreign fossil fuels to cutting Government outlays and trimming household budgets, to renovation, design, and construction jobs that can't be exported. Despite this promise, energy efficient options in housing are not well understood by consumers, and homebuyers today often pass up green opportunities that are in their economic interest. Our challenge as legislators is to devise programs to inform consumers and jumpstart the green housing economy.

Representative Perlmutter's G.R.E.E.N. Act, is the first comprehensive green housing bill to be introduced in Congress. Working with Chairman Menendez and Senator Schumer, I drafted a companion to the G.R.E.E.N. Act and introduced it last June. Similar to Representative Perlmutter's bill, the Energy Efficiency in Housing Act would authorize programs and incentives to encourage green construction and retrofitting.

EEHA would energize the market for energy efficient and location efficient mortgages by directing the HUD Secretary to develop upfront incentives for homebuyers. As a result of lower monthly energy costs, green homeowners are slightly less likely to default on their mortgage over time. This lower credit risk justifies borrowing incentives such as waived fees and lower points and rates. Additionally, EEHA would create incentives in the secondary mortgage market, making it more profitable for lenders to sell these products.

On the public housing side, EEHA would require the Secretary to develop incentives for energy efficiency for the housing programs that HUD oversees, designed so that savings are shared between landlord and tenant. To help find the right balancing points, the bill would authorize a 50,000-unit demonstration program for Section 8.

As Members of this Subcommittee well know, housing programs often cut across layers of government. To help State and local governments experiment with novel and innovative green housing programs, EEHA would authorize a revolving loan fund. It would also create a grant program so that community development nonprofits can participate in and administer construction and retrofitting efforts.

Mr. Chairman, I once again commend you for holding this hearing. With buildings accounting for between 40 percent and 50 percent of greenhouse gas emissions, green housing incentives offer environmental promise in addition to jobs and cost savings.

Unfortunately, I need to leave to return to the confirmation hearing of Elena Kagan. My staff will monitor all comments and suggestions raised today and I will consider them in refining and advancing my bill. I look forward to continuing our work on green housing legislation. Thank you.

PREPARED STATEMENT OF REPRESENTATIVE ED PERLMUTTER

Thank you Chairman Menendez, Ranking Member Vitter, and Members of the Subcommittee, for inviting me here to testify on green housing and energy efficiency. Renewable energy and energy efficiency have long been a priority of mine. We must find different ways to power our country and find ways to save energy where possible. Our Nation's building stock is one area in particular where it is important we focus our efforts. Combined, our homes, businesses, schools, governments and industries consume more than 70 percent of the natural gas and electricity used in the country.

When I came to Congress in 2007, I was selected to serve on the House Financial Services Committee. I proposed ways to increase green housing and energy efficiency during the Committee's consideration of several bills. Chairman Frank recognized the interest among Committee Members and asked me to head the Energy Efficiency Task Force. The task force included Democrats and Republicans. We held a number of meetings to gather feedback on best practices and ways to increase energy efficiency. As a result of the input the task force received, Congresswoman

Judy Biggert and I introduced the Green Resources for Energy Efficient Neighborhoods Act (GREEN Act). The GREEN Act initially passed as part of the comprehensive House energy package in the 110th Congress and then again in the 111th Congress.

Senator Sheldon Whitehouse introduced companion legislation last year. I am proud to work with Senator Whitehouse as someone who shares the commitment to renewable energy and energy efficiency. I would like to take the opportunity to thank him for all of his work and expertise on these matters. For the purposes of my testimony, I will refer to the GREEN Act and Senator Whitehouse's Energy Efficiency Housing Act of 2009 interchangeably.

The legislation is an incentive-based bill and will help create jobs and save taxpayers money. According to an independent study by the American Institute of Architects, the GREEN Act would potentially create more than 140,000 jobs. HUD estimates it spends approximately $5 billion on both direct and indirect energy costs, making energy one of HUD's biggest line items. This legislation establishes a demonstration program of 50,000 HUD units to show cost-effectiveness and to confirm utility costs will go down. HUD believes this is an area where significant cost savings can be recognized and estimates a conservative savings of just 5 percent would save taxpayers $1 billion over the next 5 years. Savings from energy efficiency will also help improve the quality of life for consumers, while putting money back in their pockets and giving them greater control over their disposable income.

Energy efficient and location efficient mortgage outreach, which is a critical component to fostering livable communities is included. A renewable energy systems leasing program will be developed, allowing consumers to take advantage of renewable energy without the up-front costs. Appraisal standards are updated to ensure that energy efficient and renewable features are taken into account during the appraisal process, a necessary step towards properly incentivizing green housing.

The provisions included in the GREEN Act were developed in consultation with stakeholders and other industry experts. Many groups support this legislation including the National Association of Home Builders, the National Multi-Housing Council, the Mortgage Bankers Association, the U.S. Green Building Council, Enterprise Community Partners, American Planning Association, American Institute of Architects and individual companies such as LENNAR Ventures to name a few.

Both the GREEN Act and Energy Efficient Housing Act are examples of the forward-thinking we must do to encourage energy efficiency and move our Nation towards greater energy independence. These bills strike a balance by showing it is easy to be green, making energy efficient practices more affordable, accessible and achievable. Simply put, energy efficiency measures are good for national security, good for the environment and good for jobs. For these reasons, I hope the bill introduced by Senator Whitehouse will be part of the conversation going forward on comprehensive energy reform.

I look forward to working with you to move this legislation. Thank you again for this opportunity, I am happy to take any questions.

Attachment

AIA Policy Research and Analysis

Rebuild and Renew:

The Impact on Job Creation in the Building Industry of the GREEN Act

April 22, 2010

Summary

Energy legislation currently before Congress presents an opportunity to invest in the sustainability of buildings, which according to the U.S. Department of Energy, accounts for nearly 70 percent of U.S. electricity consumption.[1] They also create jobs for a wide range of professions, from architects and engineers to construction managers, contractors, carpenters, HVAC specialists, and others.

This analysis explores the job creation potential of the Green Resources for Energy Efficient Neighborhoods (GREEN) Act (H.R. 2336). Although precise numbers for job creation are imprecise due to the challenges in determining actual funding levels and their impact on employment in the real world, using existing studies and data, this study concludes that the GREEN Act could create or save as many as 140,000 jobs in the building design and construction industry per year.

Introduction

On May 7, 2009, Reps. Ed Perlmutter (D-CO) and Judy Biggert (R-IL) introduced the Green Resources for Energy Efficient Neighborhoods (GREEN) Act (H.R. 2336).

The GREEN Act includes numerous provisions that would provide incentives and programmatic changes at the Department of Housing and Urban Development (HUD) that would make the nation's housing stock more energy efficient. These provisions not only will contribute to a reduction in greenhouse gas emissions caused by the built environment; they also will create or preserve thousands of jobs in the building design and construction industry.

The American Institute of Architects' plan for economic recovery (www.aia.org/rebuildandrenew) calls for investments in infrastructure that create greener buildings, vibrant communities, and a 21st century transportation network that is good for both the environment and economy. The AIA believes that investing in such projects will create both jobs and reduce energy consumption from the built environment.

[1] http://buildingsdatabook.eren.doe.gov/docs/xls_pdf/1.1.9.pdf

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This study analyzes the potential impact of job creation in the building design and construction sectors from the GREEN Act.

Analyzing the Data

In order to measure the potential job creation impact of the GREEN Act on the building design and construction sector, it is necessary to first analyze the amount of funding that could potentially be invested in building design, construction, and/or retrofit from the legislation; and then calculate the potential number of jobs that would be created or preserved from this investment.

There are certain limitations to this approach. First, actual funding amounts are dependent on the annual appropriations process, and it is often the case that appropriations do not match the authorized amount.

Second, there is no clear consensus on how investments in building projects, particularly retrofits, create jobs. This study bases its estimates on two recent studies that measure the extent of job creation in the building industry: a 2007 study by the Center for Regional Analysis at George Mason University[2], which found that every $1 million in investments in new construction creates 28.5 full-time jobs; and a 2009 study by the Center for American Progress and the Political Economy Research Institute[3] that found that every $1 million spent on retrofits creates 16.7 direct, indirect, and induced jobs.

Building-Related Funding in the GREEN Act

Several provisions within the GREEN Act authorize funding for the design, construction, and/or retrofit of buildings:

- *Energy Efficiency and Conservation Demonstration Program (Sec. 5).* Sec. 5 establishes an energy efficiency and conservation demonstration program for multifamily housing projects assisted with project-based rental assistance.

- *Residential Energy Efficiency Block Grant Program (Sec. 16).* Sec. 16 establishes a residential energy-efficiency block grant program to distribute grants for activities that improve the energy-efficiency of single-family or multifamily housing.

- *Sustainable Low-Income Community Grant Program (Sec. 18).* Sec. 18 authorizes the Secretary of HUD to make grants to nonprofit organizations to use for a number of activities, including training, supporting, and providing financing to eligible community development organizations and qualified youth service and conservation corps in improving energy efficiency.

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[2] http://www.naiop.org/foundation/contdev.pdf
[3] http://www.americanprogress.org/issues/2009/06/pdf/peri_report.pdf

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- *Alternative Energy Sources State Loan Fund (Sec. 23).* Sec. 23 authorizes HUD to provide loans to States and Indian tribes to provide incentives to owners of single-family and multifamily housing, commercial properties, and public buildings to provide renewable-energy sources, energy-efficiency and energy-conserving improvements, and features for such structures, or infrastructure related to the delivery of electricity and hot water for structures lacking such amenities.

- *Green Guarantees (Sec. 28).* Sec. 28 authorizes HUD to guarantee mortgages used to finance sustainable building elements for housing that is subject to the mortgage. HUD is prohibited from guaranteeing a mortgage unless the borrower has demonstrated the amount of savings attributable to incorporation of the sustainable building elements to be financed by the green portion of the mortgage.

GREEN Act Authorization Levels

Section	Provision	Annual Authorization	Duration
5	Multi-Family Residential Demonstration Program	$50,000000	N/A
16	Residential Energy Efficiency Block Grant Program	$2,500,000,000	FY 2010 (such sums in following years)
18	Sustainable Low-Income Community Grant Program	$10,000,000	FY10-14
23	Alternative Energy Sources State Loan Fund	$5,000,000,000	N/A
28	Green Guarantees	$500,000,000	FY10-14

Potential Job Creation in the Building Industry

Based on the figures above, it is possible to establish a potential range of job creation from the GREEN Act.

As stated earlier, this study uses figures from two recent studies to determine the job creation impacts from the design, construction, and/or renovation of buildings.

- *The Contribution of Office, Industrial and Retail Development and Construction on the U.S. Economy*, a 2007 study by the Center for Regional Analysis at George Mason University for the National Association of Industrial Office Properties (NAIOP), found that every $1 million in investments in *new* construction creates 28.5 full-time jobs.[4]

- *The Economic Benefits of Investing in Clean Energy*, a 2009 study by the Center for American Progress and the Department of Economics and Political Economy Research Institute at the University of Massachusetts, Amherst, found that every $1 million spent on building *retrofits* creates 16.7 direct, indirect and induced jobs.[5]

[4] http://www.naiop.org/foundation/contdev.pdf
[5] http://www.americanprogress.org/issues/2009/06/pdf/peri_report.pdf

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As indicated, the two studies analyze different types of projects: the Center for Regional Analysis looks at job creation for new construction, while the Center for American Progress looks at job creation from retrofits. Therefore, it is necessary to make a determination on whether programs in the GREEN Act would provide funds for new construction, retrofits, or a combination of both.

The Sec. 5 Energy Efficiency and Conservation Demonstration Program, the Sec. 16 Residential Energy Efficiency Block Grant Program, the Sec. 18 Sustainable Low-Income Community Grant Program, and the Sec. 23 Alternative Energy Sources State Loan Fund authorize funds for energy efficiency improvements, suggesting, though not explicitly stating, that funding will go primarily toward retrofits. The Sec. 28 Green Guarantee program does not indicate whether funding can go toward mortgages for new or existing homes.

Based on the above job creation figures and allowable uses for GREEN Act authorizations, it is possible to develop an estimate of potential job creation in the building industries based on these GREEN Act provisions.

GREEN Act Potential Job Creation

Provision	Jobs From Retrofits[4]	Jobs From New Construction[5]
Multi-Family Residential Demonstration Program	835	
Residential Energy Efficiency Block Grant Program	41,750	
Sustainable Low-Income Community Grant Program	167	
Alternative Energy Sources State Loan Fund	83,500	
Green Guarantees		14,250
Total	**126,252**	**14,250**
TOTAL POTENTIAL JOB CREATION		**140,502**

Conclusion

Although it is difficult to precisely predict job creation that will arise from legislation such as the GREEN Act, based on existing research and data, it is clear that the major building-related, energy-efficiency provisions in the bill will have a significant impact on job creation and retention in the design and construction industries.

The large job creation potential per dollar invested in energy-efficient building design, construction, and renovations – combined with the sizable potential for energy savings from building efficiency measures – suggests that passage of energy legislation like the GREEN Act will help policymakers achieve the twin goals of sustainability and economic development.

For more information, contact the AIA Federal Relations Team at 202-626-7438 or govaffs@aia.org.

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PREPARED STATEMENT OF RON SIMS

DEPUTY SECRETARY, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

JUNE 30, 2010

Good morning Chairman Menendez, Ranking Member Vitter, distinguished Members of the Subcommittee. Thank you for the opportunity to testify on behalf of the Department today on S. 1379, the Energy Efficiency in Housing Act of 2009. I want to commend you, as well as Senators Whitehouse and Schumer, for your support for energy efficiency and green building throughout HUD's programs and in the affordable housing sector at large. I also want to take this opportunity to commend Chairman Dodd on S. 1619, the Livable Communities Act—which in many ways complements Senator Whitehouse's efforts through the bill we are considering today.

I am here today to provide support for the bill as it impacts HUD's programs and policies, contingent on amending certain provisions of the legislation. Before coming to HUD I was County Executive in King County, Washington for a dozen years, where we developed one of the most cutting edge green building and smart growth programs in the country. As you know, with strong support from this Committee, HUD has created a new Office of Sustainable Housing and Communities and Secretary Donovan has asked me to oversee that office. In that capacity I am responsible for synchronizing our efforts with other departments and agencies and implementing HUD's green building and energy efficiency initiatives as we bring some of the best local ideas for building strong, sustainable communities to the national stage.

So I have a strong interest in the outcome of this legislation. That's why we have worked closely with Congressman Perlmutter and the House Financial Services Committee on H.R. 2366, on the House counterpart to this bill and, at the same time, HUD has begun to implement a series of initiatives that are very much aligned with the goals and objectives of this legislation.

I am pleased to report that HUD has made some significant steps to further our commitment to improving the energy efficiency of the 5 million HUD-subsidized affordable housing units and incorporating energy efficiency standards throughout the various HUD programs. HUD's FY2010 budget proposal, our new Strategic Plan and newly formed partnerships with the Departments of Transportation and Energy and the Environmental Protection Agency reflect HUD's commitment to increasing and promoting energy efficiency.

Nowhere is this commitment more evident than in HUD's new FY2010–FY2015 Strategic Plan, which we published last month. Indeed, one of the five strategic goals of the 6-year plan is to "promote energy efficient buildings and location-efficient communities that are healthy, affordable and diverse." [1]

Specific strategies included in the Strategic Plan to support this goal are to: (i) Support and promote an energy efficient, green and healthy housing market by retrofitting existing housing; (ii) Support energy efficiency in new construction projects; (iii) Improve home energy labeling and high-performing upgrades that reduce the carbon footprint of non-HUD supported residential buildings; and (iv) Reduce energy consumption and incorporate green buildings in the design and operation of HUD-supported affordable housing.

In support of this goal, over the next 2 years, the Department has set a goal of 159,000 energy efficient retrofits or green housing units through our Recovery Act initiatives, as well as through our ongoing programs.

In addition, HUD is hard at work on a comprehensive Energy Action Plan that will provide detailed reporting on energy consumption and expenditures in HUD-assisted housing and lay out a set of specific steps HUD will take over the next 2 years to dramatically increase the energy efficiency and broader environmental performance of HUD-assisted housing. This Plan is required of us every 2 years under the Energy Policy Act of 2005 and we look forward to sharing the next version with the Committee later this year.

Greening HUD's stock of public and assisted housing supports four sound public policy principles. First, it's sound fiscal policy. HUD's budget is directly impacted by utility costs. HUD spends an estimated $5 billion annually on energy, either directly in the form of the public housing operating subsidy or indirectly through utility allowances and Section 8 contracts in assisted multifamily housing. This is an area where significant cost savings are possible. For example, a modest savings of just 5 percent per year could generate a savings of $1 billion over the next 5 years.

The overall cost of utilities in public housing (including water and sewer charges) in 2006 totaled $1.85 billion, including an estimated $421 million that was spent

[1] U.S. Department of Housing and Urban Development, Strategic Plan, FY2010–2015.

through utility allowances on tenant-paid utilities. Utility costs have also been steadily increasing in assisted housing. Between 2000 and 2005, average owner-paid utility costs increased by 28 percent. In addition, HUD spent an estimated $3.2 billion on project- and tenant-based utility allowances in 2007.[2] Between 1998 and 2007, the average tenant-based Section 8 utility allowance per resident has increased by 67 percent.[3]

Second, energy efficiency and green building play a crucial role in housing affordability. Some are concerned that green building adds to the cost of housing. I do not subscribe to that view: I believe that we can't afford not to build green. Research increasingly shows that all types of affordable housing can be built or rehabilitated to rigorous green standards at minor additional cost, and often without the need for capital investment. Secretary Donovan and I are committed to making HUD a leader in green development precisely because of the benefits it will provide to people across the economic spectrum and lower-income families in particular. These kinds of investments are essential to creating the new generation of professionals—from mechanics and plumbers, to architects, energy auditors, and factory workers building solar panels and wind turbines—we need to design, install, and maintain the first wave of green technologies and unlock the clean energy economy.

As we dispel the notion that green building will mean higher costs for low income families we must recognize, while everyone is hurt by high energy costs, no one is more vulnerable to rising energy prices than low- and moderate-income families. Higher energy costs often result in cutting back on other critical needs, such as medicine and food.

Large scale green initiatives such as the Enterprise Green Communities program show that properties achieving 20 to 30 percent greater energy efficiency yield cost savings that accrue directly to low-income residents, or are reinvested back into the property in which they live.

Third, sustainable, green building has a clear connection to better health as well. Right now we can predict morbidity rates and life expectancy by zip code. In King County, we did a study called HealthScape, which looked specifically at how the built environment and the transportation system impacts public health and climate change.[4] What we found was that while people living in the most walkable areas of the county were less likely to be overweight and more likely to be physically active, in pockets of the county with lower-income and high concentrations of minority populations wide health disparities existed.

But as we saw in the High Point public housing development in Seattle, a commitment to building green can be a big part of overcoming these disparities. In addition to walkability, by adding green features specifically designed to reduce asthma triggers, the number of asthma-free days increased, and mold—which is an important asthma trigger, especially in children—was effectively controlled.

Finally, greening our buildings will have a positive impact on our environment. As the American people are well aware, transportation accounts for a third of all greenhouse gas emissions. But most people would be surprised to learn that buildings account for even more—almost 40 percent—of our emissions. About half—20 percent of all carbon emissions—are from heating, lighting and cooling our homes.[5] As many of the Nation's Mayors, some 1,042 at last count, have recognized through their commitments to the 2030 Building Challenge, significant improvements in the energy efficiency of our building stock will yield big gains on the carbon reduction front as well. We believe that the Federal Government should be—and can be—a leader, rather than a follower in reducing the impact of housing on global warming and climate change.

Studies have already found a significant return on efficiency investments. A study of energy savings in single-family homes through the Department of Energy's Weatherization Assistance Program from 1993 to 2005 found that the program achieved savings of 23 percent in gas-heated single-family detached homes.[6]

This and other studies point to significant savings resulting from energy improvements. For example, through some 200 Energy Performance Contracts in public

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[2] U.S. Department of Housing and Urban Development, Energy Progress Report to Congress, November 2008.

[3] Utility allowances increased from an average of $996 per year in 1998 to $1,467 per year in 2007.

[4] Whitney, Sheryl Verlaine, "Seeking Sustainable and Inclusive Communities: A King County Case Study", April 2010.

[5] Department of Energy, 2008 Building Energy Data Book.. Buildings account for 38 percent of carbon emissions, residential buildings account for 20 percent.

[6] Schweitzer, Martin, "Estimating the National Effects of U.S. DOE's Weatherization Assistance Program With State Level Data: A Meta Evaluation 1993–2005", Oak Ridge National Laboratory, September 2005.

housing, HUD estimates a cost savings of approximately $100 million per year for an investment of $571 million, with an average investment of less than $4,000 per unit.

So there should be no doubt that lower energy costs in federally subsidized housing are critical to the overall health of the portfolio, and to the welfare of the residents. It is clear that greening buildings will have dramatic benefits for low and moderate income households by reducing their energy costs, improving their health, and increasing economic opportunities. Green building is not only the key to making all our neighborhoods better—it is essential to building the kind of stronger communities America needs to meet the challenges of the 21st century.

The Energy Efficiency in Housing Act will enable HUD to be a more effective partner in this effort. The bill is wide ranging and comprehensive, and in totality represents an important effort to address the high cost of heating, lighting, and cooling federally financed, assisted or insured housing. With suggested modifications that we will be happy to provide the Committee, we are generally in support of the key provisions of the bill as they impact HUD policies and programs.

The bill includes a number of provisions for piloting or demonstrating energy efficiency in federally assisted or insured multifamily housing, a sector which, due to the .split incentive. between residents and owners faces particular challenges in incentivizing energy investment, along with limitations on accessing energy performance contracts that have so been used with some success in public housing. There are also sections related to energy efficiency in mortgage underwriting, incorporating green standards in the HOPE VI program and stronger energy efficiency requirements for rural housing.

The bill also provides for a competitive grant program to fund local community organizations in low-income communities. The bill also requires HUD to play a financing role in residential renewable energy leasing. This would be an area outside of HUD's current expertise, and the prescriptive terms and potentially risky nature of such financing could ultimately lead to higher costs, or lower participation if high fees are required to offset costs. We look forward to working with you on technical amendments to the bill to clarify this issue. Two provisions in the bill involve public housing, the first applies the Green Communities standard to HOPE VI, the second requires an annual report to Congress. In addition, there are several provisions of the bill that fall outside HUD's jurisdiction.

Our support is contingent on a number of amendments to the bill that we would like to share with the Committee in order to more closely align the bill with the House version of the bill, as well as with HUD's current practices and procedures. The bill also contains provisions that are inconsistent with the Federal Credit Reform Act, and Federal credit policies; such provisions would lead to less efficient or effective use of Federal credit assistance to achieve policy goals and could be costly. Let me touch on a few areas where we believe corrections or modifications will be needed.

First, with regard to minimum standards, our understanding of the bill is that it gives the Secretary the discretion to apply minimum or enhanced energy and green standards as cited in Section 3 (Definitions). The only programs for which these standards are required are for certain demonstration or pilot programs specified in the legislation. The Committee may want to consider providing the Secretary with the discretion to apply these standards to other programs. The primary challenge will be that recipients of HUD funds in those States who have not yet adopted the minimum standard (the 2009 International Energy Conservation Code) would need to familiarize themselves with the higher code requirements. In addition, even though the application of these standards is discretionary, the definition of HUD "assisted programs" that are covered by these standards should exclude loan insurance and loan guarantee programs, consistent with the definitions in the most recent House version of the bill. It would also be helpful if the bill simply cited the specific programs in the bill to which these definitions apply.

Second, if there is a "green premium" associated with implementing these standards, HUD may need to raise Total Development Cost (TDC) limits accordingly; however it should be clear that any increases in front-end development costs would be offset by lower operating costs, and that energy efficient construction doesn't always require additional costs.

Third, we recommend re-ordering and amending the provisions of the legislation related to energy efficient (and location efficient) mortgage underwriting. Section 11 creates a Commission to study and make recommendations for the creation of model energy efficiency mortgage products and underwriting standards, while Section 10 would have the FHA developing methods for considering the impact of utility cost savings in underwriting standards, separate from and prior to the Commission's proposals. HUD recommends reversing these two sections to allow the Commission

to complete its work, submit its recommendations and FHA to consider those recommendations, instead of FHA creating new products without such guidance. We will be happy to provide the Committee with detailed technical suggestions to achieve this end.

We also recommend several improvements to Section 5, which requires the Secretary to establish "budget neutral incentives for encouraging lenders to make, and homebuyers and homeowners to participate in, energy efficient mortgages and location efficient mortgages."[7] The key words here should be "budget neutral." The bill should explicitly specify that budget neutrality applies to the FHA Mutual Mortgage Insurance (MMI) Fund and other FHA funds when considering these incentives. In addition, this section requires the Secretary to "consider the lower risk of default on energy efficient and location efficient mortgages" compared to other mortgages; we recommend that this lower risk should be contingent on HUD's analysis and determination that these mortgages do lower the risk of delinquencies or default. This section also establishes a new definition of an energy efficient mortgage for FHA which may be problematic, in that projected or modeled energy savings are not always realized in practice—and may create confusion with current FHA energy efficient mortgages, which are defined differently. Finally, we suggest that this section of the bill also be implemented in conjunction with the Commission's work as described in Section 11 of the bill, rather than requiring the Secretary to act before the Commission has submitted its recommendations.

In the multifamily arena, Section 6 requires HUD to develop incentives to increase the energy efficiency of FHA-insured multifamily housing—such as a discount on premiums, loan limit increases for energy efficiency improvements, or reductions in required owner contributions—but does not establish clear parameters for these incentives or require budget neutrality. This section would be improved by providing permissive authority for HUD to create incentives, rather than requiring them, and by including a more limited set of incentive authorities that do not provide blanket waivers of the core statutory loan limits and underwriting requirements that apply to all other multifamily loans.

We look forward to working with the Committee staff to address these and other suggested modifications to the bill. These include, for example, technical amendments for consistency with the Federal Credit Reform Act, possible improvements to the design of multifamily housing pilot programs; more manageable timelines for issuing regulations; amendments to Sections 19 and 21 in order to ensure consistency with Federal credit program policy; and ensuring that HUD has the ability to do proper due diligence on the financial and operational feasibility of implementing new programs in new areas of activity, such as solar leasing (Section 21).

I'd like now to take a few moments to highlight the progress we have made over the past 18 months in moving this agenda forward and to illustrate what HUD is already doing in these areas. The Department's successful Mark to Market (M2M) Green Initiative, initiated in 2007, continues to provide property owners who have entered the Mark to Market Program enhanced incentives and credits for .going green.. To date, the program has led to the green rehabilitation of some 27 properties with approximately 2,700 units. HUD requires a green physical condition assessment, an energy audit and an integrated pest management inspection, in order to identify energy and water saving and other measures that improve indoor air quality and benefit the environment.

The Green Initiative is voluntary; to incentivize owners, HUD offers to reduce the required contribution from the owner from 20 percent to just 3 percent, and also increase the incentive performance fee, which is paid annually upon meeting required conditions. Owners agree to green the property for the life of the use agreement (generally 30 years) and to develop and maintain a green Operations and Maintenance Plan.

Recovery Act Investments

Building on the success of this initiative, HUD has targeted funds appropriated by Congress through the American Recovery and Revitalization Act of 2009 to further its commitment to energy efficiency.

Approximately $250 million has been made available for energy efficient and green retrofits in assisted multifamily housing. 210 project applications have been accepted, with approximately 20,000 units. The first award under the Green Retrofit Program went to a New York project, the West 135th St. Apartments in Harlem, New York, a 198-unit, 10 building, Section 8 assisted property developed by Jonathan Rose Companies. Energy efficient improvements will include Energy Star re-

[7] Section 5, Incentives for Energy Efficient Mortgages and Location Efficient Mortgages. (Note that this provision is not included in the House version of the bill).

frigerators, replacement of 32 old boilers with 10 high-efficiency boilers, rooftop solar photovoltaic panels, formaldehyde-free kitchen cabinets, recycled-material kitchen counters, Energy Star ceiling fans, compact fluorescent lamp (CFL) fixtures and bulbs, double-pane argon-filled low emissivity (low-e) windows, insulated exterior doors, low-flow fixtures, shower heads and toilets, linoleum flooring to replace vinyl tile, wood floor installations using Forest Stewardship Council (FSC)-certified wood, and nontoxic paints, adhesives, and sealants throughout.

Public housing has also received a significant boost in additional resources to green their housing stock. Housing authorities received an additional $4 billion over the past year through the Recovery Act in the Capital Fund for energy efficiency, green and other upgrades—$3 billion in formula grants, and $1 billion in competitive funds. Of the total amount, $300 million has been made available through competition for high-performing green projects that meet Enterprise Green Communities standards; 36 awards were made to public housing authorities for 1,400 new green units. Eighteen of these projects will be utilizing photovoltaic panels, another 8 projects will install geothermal heating and cooling and one project will be utilizing either photovoltaic panels or wind turbines.

Another $300 million has funded high performing energy retrofit projects that achieve 20–40 percent in energy savings. 134 housing authorities received awards for a total of 222 energy retrofit projects with 35,000 units. As part of these awards, 31 projects plan to retrofit units with photovoltaic panels and 13 projects with geothermal heating and cooling systems.

Additional funds have been made available for green building through the competitive portion of the Native American Housing Block Grant program, as well as through the second round of the Neighborhood Stabilization Program, both of which have strong incentives for improving the energy efficiency of buildings.

Beyond the Recovery Act

Beyond these Recovery Act investments, HUD is implementing a number of strategies for green affordable housing. In public housing, we continue to offer incentives to Public Housing Authorities to work with third party Energy Services Companies (ESCOs) to finance and implement energy upgrades in their buildings through Energy Performance Contracts, and are in the process of establishing the Office of Field Operations (OFO) Energy Center to assist housing authorities to manage and implement these contracts.

HUD's Office of Community Planning and Development has implemented several initiatives to promote green and energy efficient practices through the HOME program. CPD awarded recaptured HOME funds to expand the supply of energy-efficient and environmentally friendly affordable low-income housing. Ten $250,000 awards have been made. Additionally, the HOME program developed a Model Guide and training curriculum for Participating Jurisdictions and Community Housing Development Organizations (CHDOs) on energy efficient and green building.

HUD's Office of Healthy Homes and Lead Hazard Control is working with DOE and the Environmental Protection Agency (EPA) to develop a home assessment procedure that can be used to identify priority residential health hazards in conjunction with an energy audit. The Office is also funding healthy homes demonstration projects to pilot this integrated housing assessment and intervention approach, and supporting research to improve our understanding of the potential benefits of green rehabilitation on indoor environmental quality and resident health. In FY2009 the Office competitively awarded $2.4 million to fund four cooperative agreements to study health aspects of low-income green housing in Arizona, Minnesota, New York, and Ohio, respectively. The Office continues to partner in the Centers for Disease Control and Prevention's National Center for Environmental Health to conduct additional research on the health benefits of green rehabilitation and maintenance practices in low-income housing.

Multifamily Weatherization

HUD has also formed a partnership with the Department of Energy (DOE) to coordinate investment of Recovery Act funds. The partnership includes a commitment to develop a common set of guidelines and specifications for retrofitting public housing as well as privately owned, federally subsidized rental properties.

A highlight of our partnership is a Memorandum of Understanding signed by the two agencies aimed at eliminating duplicative income verification requirements for DOE's weatherization program, which received $5 billion in ARRA funding. Using available information, HUD has provided DOE with lists of nearly 7,000 public housing properties (with 936,000 households) where all of the buildings meet income eligibility requirements for DOE's weatherization program. In addition, HUD has identified more than 10,000 other federally assisted properties (567,000 households)

that meet in the income eligibility requirements. Together, these qualified properties account for 1.5 million assisted households that meet at least one of the eligibility criteria required under the DOE weatherization program. HUD has also begun establishing a process for collecting additional information that we believe will enable us to certify many more assisted buildings as meeting the income eligibility requirement.

HUD has undertaken a series of training sessions with its regional and field office network to ready field management, multifamily and public housing program staff to help support the successful implementation of the weatherization program. To date over 300 HUD staff have been briefed on the weatherization program, including recent rule changes and HUD's published list of qualified properties.

This partnership is yielding results on the ground. A number of States have begun to target weatherization assistance for multifamily rental housing. The Rhode Island Office of Energy Resources, has allocated $7 million (roughly one third of their ARRA funding) to buildings with multiple units. The State of Colorado allocated $11 million for multifamily weatherization program. In Pennsylvania, the State added the Pennsylvania Housing Finance Agency (PHFA) as an additional sub grantee to serve multifamily units statewide. PHFA is partnering with the State weatherization agency to support existing preservation through its "smart rehab program" with $20 million in ARRA funding. Florida, Michigan, Texas, California are also initiating multifamily weatherization programs, in addition to States like New York that have historically committed weatherization funds to multifamily housing.

New Initiatives

Looking beyond current programs and funding, we are in the process of implementing a new $50 million Energy Innovation Fund. This Fund, administered by FHA, will pilot or test various strategies for financing cost-saving (and energy-efficient) measures in both the single family and multifamily sectors. We expect to deploy these funds in innovative financing initiatives later this year and will keep the Committee closely informed.

In addition, we are exploring options for utilizing HUD's existing regulatory authority to encourage owners of HUD-assisted properties to make green improvements as they rehabilitate and refinance their properties.

Sustainable Communities Initiative

I'd like to take a moment to focus on an increasingly important element of green building, in addition to energy efficiency: the location efficiency of the property. Most green building programs provide additional points for housing that is located at or near transit, or provides access to close-in or walkable amenities and services. On average, Americans spend more than half of their incomes (52 percent) on housing and transportation.

That is why HUD joined with the Department of Transportation and EPA to create an unprecedented Partnership for Sustainable Communities that, for the first time, brings our agencies together to speak with one voice on housing, transportation, and environmental policy. That's also why we think Senator Dodd's Livable Communities Act, is so important, and is complementary to S. 1379. Sustainable development must include both the energy efficiency of the building itself as well as the location of that building, and the extent to which there is good access to transportation, services and amenities. The Livable Communities Act would permanently authorize the Office of Sustainable Housing and Communities at HUD and solidify our partnership with DOT and EPA. We are strongly supportive of this legislation and intend to provide the Committee with technical comments in the near future.

This month we published a key product of the Partnership's work—a Notice of Funds Availability (NOFA) for $140 million in Sustainable Communities Initiative funding to enable local communities and metropolitan areas to plan and implement comprehensive sustainable development.

The Sustainable Communities Initiative includes $100 million for Regional Planning Grants that will encourage metropolitan regions to develop integrated housing, land use, and transportation plans. The goal of this initiative is not just to develop plans—it is to articulate a vision for growth tailored to specific metropolitan markets that Federal housing, transportation, and other Federal investments can support. Funding to these metropolitan regions will be used to support the development of integrated, state-of-the-art regional development plans that use the latest data and most sophisticated analytic, modeling, and mapping tools available.

Earlier this year, we issued an Advanced Notice and Request for Comment for the program, inviting feedback through a new online "Wiki" accessible via HUD's Web site and through an extensive listening tour around the country. We wanted commu-

nities to tell us what works for them, what isn't working, and how we can use this program to help them build sustainably. Just as importantly, we hoped to send a very important signal that we in the Obama administration are serious about being the kind of partner that listens and learns.

And the response exceeded even our expectations. We received over 900 written comments, met with over 1,000 stakeholders in seven listening sessions, and staged webcasts that touched thousands more. The feedback we received was overwhelmingly positive as well—from mayors and other officials of both small and large communities, to business leaders in growing regions, to governors of States that have been hit hard economically.

If there was one common theme we heard it was that while community after community is ready to embrace new kinds of sustainable practices—and that the Federal role can't be about dictating what they can or can't do, but rather offering them the resources and tools to help them realize their own visions for achieving the outcomes we all want and more and more are insisting on.

Complementing this regional planning investment will be our $40 million Community Challenge Planning Grant program targeted to local communities. HUD has also issued a NOFA for this program—in conjunction with DOT's NOFA for its $35 million "TIGER II" planning grant program. Where DOT's program will fund planning activities that relate directly to a future transportation capital investment, HUD's program will fund land-use related planning activities that would be linked to a future transportation investment—modernizing the building codes, zoning laws and other barriers communities face to sustainable development.

Greening America's Homes Through the Transformation of Rental Assistance

I would also like to explain how HUD's Transformation of Rental Assistance initiative, including its green physical needs assessment, advances the Administration's sustainability agenda. TRA would to reform America's public housing system and transform the way the Federal Government provides rental assistance to more than 4.5 million of our most vulnerable families.

But let me also explain to you how TRA would spur our Clean Energy Economy. As this Committee knows, every property has a lifecycle, and when a property has reached the end of its useful life, the owner has to figure out how to replace it or it will be lost. TRA will allow properties to establish .reserves for replacement,. which will help preserve millions of units as they reach the end of their normal life's course. This is important because it is more sustainable to preserve and rehabilitate existing housing than to build anew.

The first condition for conversion to TRA is "Promoting the rehabilitation, energy-efficiency, and long-term financial and physical sustainability of properties." In addition, TRA would require the property to undergo a "green" physical condition assessment—an analysis to show what exactly would need to be done to a property to green it.

The main reason for PHA's to convert to TRA is to generate the capital needed to rehab a building. The capital comes in a form of a mortgage of sorts. When lenders underwrite these investments and look at planned future uses/income, TRA will require the cost of the property rehabilitation to include rebuilding green. Our estimate is that between $20.7 billion and $28.9 billion will be borrowed in these "mortgages" and spent on retrofits that must be green. These investments will go a long way to improving buildings as well stimulating markets and products, such as green mortgage and underwriting standards and building materials.

Finally, today, 1.2 million public housing units provide low-income families a permanently affordable place to live. The units are often built more densely than surrounding housing. Tomorrow, 1.2 million or more TRA units will be in the same locations, with the same target population. In other words, Mr. Chairman, we know exactly where to target infrastructure that promotes sustainability—transit, being the most obvious.

Mr. Chair and Members of the Committee, I hope this overview of HUD programs and initiatives addresses the opportunities and challenges that we are facing as we address green building and energy efficiency in HUD-assisted properties. We are still in the process of reviewing the particulars of S. 1379 and will be happy to provide you with more detailed comments once that review is complete.

Thank you again for the opportunity to appear before the Committee today.

PREPARED STATEMENT OF DAVID CALDWELL, JR.

VICE PRESIDENT, ON BEHALF OF CALDWELL AND JOHNSON, INC.

JUNE 30, 2010

Good Morning Mr. Chairman and Members of the Committee, thank you for offering me the opportunity to speak on behalf of the merits of green housing, and, in particular, on the Energy Efficiency in Housing Act of 2009. My name is David Caldwell, Jr., a second generation home builder from a small family owned construction company in Rhode Island and a recent Marine Corps veteran of Operation Iraqi Freedom.

Recently, our company completed the first Department of Energy Builder's Challenge House in Rhode Island, which was a complete gut remodel of a foreclosed and abandoned home originally built in 1952. (See picture.) For an additional $5,000 in construction costs, we were able to more than double the energy efficiency of the house. The house, built entirely on speculation, has 3 bedrooms, 2.5 baths, just under 1300 square feet, and sold for $265,000 to a single mother who is a school teacher with two daughters. We had multiple offers over the asking price of $259,900 in a matter of 5 days, and had approximately 200 people visit two open houses at the property. Suffice to say, the response to this house was somewhat overwhelming.

The principle value proposition is that the additional $5,000 in construction costs spent to double the energy efficiency of the house, when amortized over 30 years at present rates, equals about $1 per day. The energy savings for the house, at 2010 rates, equals approximately $2 per day. Over time, assuming a fixed rate mortgage, if the price of energy increases, this gap will likely increase substantially. Once again, the homeowner will receive approximately double the value in energy savings that the green features of the home will cost over time. That's a return on investment that should appeal to everyone.

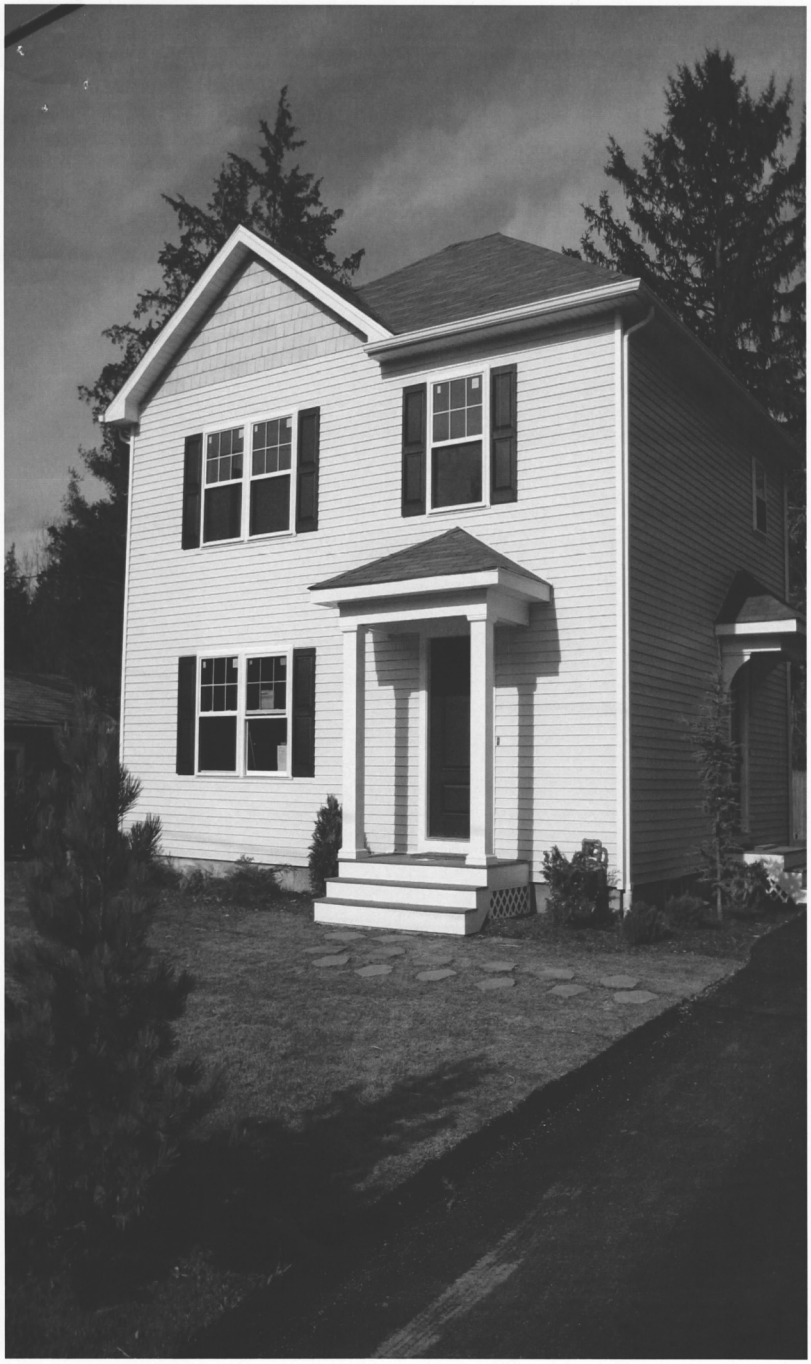
Though in Rhode Island there appears to be significant demand for this type of home, neither the mortgage industry nor the appraisal community is at this time willing to assign any additional value to homes built to green or energy efficient standards, making appraisals and financing very difficult, particularly for those applying for FHA mortgages with low down payments.

Not one person who has seen this house has disagreed with the value proposition for the homeowner created by its increased energy efficiency. However, the overwhelming focus of the financial community, the real estate community, and the appraisal community is the extra cost involved, not the operational savings and value to the homeowner that has been created. Presently, I have a customer who is designing an energy efficient custom green home. When he went to the bank seeking financing for a construction loan, he explained all the attributes of the green house, including a photovoltaic system to provide enough electricity for the entire house, but the bank literally said, "we don't care about that energy efficiency stuff, it's just added expense. It does not matter for the mortgage and the appraisal."

I am frequently asked why more houses are not being built similar to the green home we constructed. I am fond of using this analogy: If a customer is purchasing a car, and sees two cars that look identical in all respects on the car lot, but knows nothing other than the fact that the first car costs 2 percent more than the second car, he or she will pick the less expensive model. If told that the first car gets over double the gas mileage of the second car, the customer will probably reason that the first car is definitely the better value, even though it costs 2 percent more money to purchase.

Today, consumers are provided with considerably more information when they purchase a car, box of cereal or cell phone than they are when they purchase a home, which is usually by far the most expensive purchase that most people make.

As such, I am very much in favor of the incentives for green housing, including the ones in the Energy Efficiency in Housing Act. I have met no one who does not believe that energy efficiency in housing is not a great idea. I have met no one who would not be willing to spend a dollar a day to save two dollars. It can be done, and should be done—I do not know why anyone would build a new house any other way, it does not make sense to me. The question, then, at this time, is why we are not collectively building in this fashion. I believe that the incentives and guidance of the Energy Efficiency in Housing Act will be a tremendous help to both homeowners and small businesses in facilitating the shift towards more sustainable and efficient housing stock. This is an outstanding example where Federal leadership can synthesize a true win-win situation for business and homeowners. Thank you again for the opportunity to testify and I am happy to answer any questions.



U.S. Department of Energy

EnergySmart Home Scale℠

Estimated annual energy usage:
Electric (kWh) 2,285
Propane (Therms) 461

Estimated energy cost:
Annual ($) 858
Monthly ($) 72

Conditioned floor area (sq. ft.): 1,248

53 Hancock Drive, North Kingstown, RI 02852
Rated by Conservation Services Group
Rating conducted **March 1, 2010**

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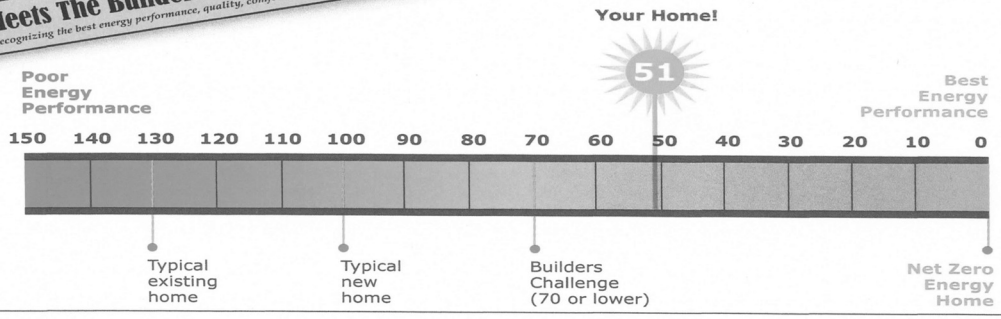
Recognizing the best energy performance, quality, comfort, health and safety in the market.



U.S. DEPARTMENT OF ENERGY

Building America U.S. Department of Energy Research Toward Zero Energy Homes

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Building New Supply Cost vs. Efficiency

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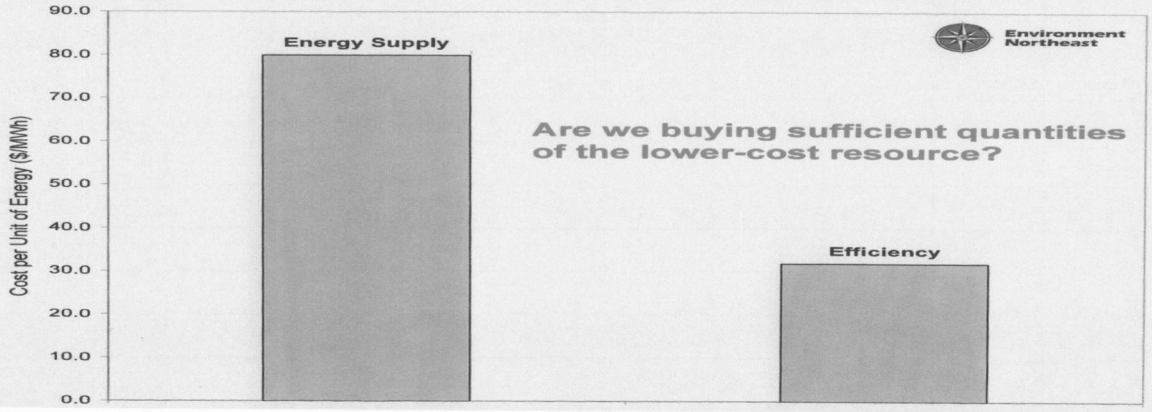
Electric
Supply Costs vs. Efficiency Costs



The Providence Journal projo.com

Economy

Comments 4 | Recommend 1

For extra $5,000, builder makes N. Kingstown house 'green'

11:18 AM EST on Monday, February 8, 2010

By Christine Dunn

Journal Staff Writer

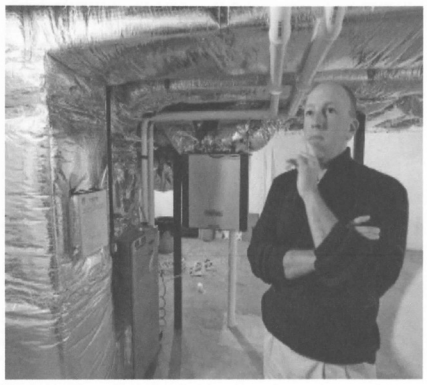
Caldwell & Johnson Custom Home Builders bought a foreclosed and abandoned house at 53 Hancock Drive in North Kingstown and rebuilt it to be a model of energy efficiency.

The Providence Journal / Bob Breidenbach

NORTH KINGSTOWN, R.I. — In Rhode Island, building green, at least in the private sector, has often meant building expensively.

The state's first two houses certified under the U.S. Green Building Council's LEED for Homes program have been pricey new homes built near the ocean in Narragansett.

Another LEED house is planned on Block Island; developer Nick Downes, of Middletown, has said he expects to price the 3,000-square-foot home, on a 4-acre site on Swede Hill, at $4.5 million.



Builder David A. Caldwell Jr. talks about the energy efficiency of the home while in the basement next to the gas furnace.

But in North Kingstown, a builder has just put the finishing touches on a green home that will be listed at $259,900 — well below that town's median house price ($292,000 in 2009).

The builder, David A. Caldwell Jr., said it cost just $5,000 extra to add the green features that will allow the house to meet four different green building standards.

"You don't have to spend a lot of money to be green," he said.

Most of the added costs were for upgrades in the house's insulation and energy systems.

Energy-efficient houses are tightly insulated, requiring an air ventilation system; to prevent heat loss, a heat recovery ventilator was installed.

A view from the stairs that lead to the new second floor. The first floor hallway has a computer station installed.

Caldwell said the air in the house will be changed with outside air at a turnover rate of 2.5 times per hour while maintaining the desired indoor temperature.

A tankless system provides hot water instantly, and a high-efficiency heater was used.

The house will be almost twice as energy efficient as a comparable new house, he said.

The project is a rebuild of a 648-square-foot, 1952 ranch house at 53 Hancock Drive. The original house, built by the U.S. Navy, had been foreclosed after the previous owner began a renovation and then abandoned the property.

The new house has 1,296 square feet of living space, 3 bedrooms and 2.5 baths.

The house is small but attractive, with bamboo flooring, a built-in computer desk in a nook near the kitchen, and a drop zone — a storage center near the back door that provides a place to drop packages, mail and recharge portable electronic devices.

Recycling bins were built in below the counter surface.

The kitchen of the house in North Kingstown built by David A. Caldwell Jr. sports a countertop made of recycled glass. The house meets four different green building standards. Below, a way to monitor energy costs online.

The Providence Journal / Bob Breidenbach

At the computer, Caldwell has placed a device that can measure the energy use of every appliance, light and outlet in the house.

The kitchen counters look like granite but are made of a recycled glass product, Eco by Cosentino, manufactured at Cosentino headquarters in Almeria, Spain. Corn oil is used in the resin.

Caldwell served in the U.S. Marine Corps and worked for a large contractor in California before moving back to Rhode Island with his wife and children to join his father's construction business.

His father cofounded Caldwell & Johnson Custom Home Builders in 1968.

The house was built on speculation, to meet four different green building standards: LEED (Leadership in Energy and Environmental Design); the U.S. Department of Energy Builders Challenge program, the National Association of Home Builders National Green Building Standard, and Energy Star.

Caldwell said it will cost about $4,000 for all the green inspections he is having done on the house.

Caldwell said it's the first project of its kind in New England to seek certification under all four standards.

But more importantly, Caldwell said the project shows that building green can deliver significant cost savings to consumers without a huge upfront investment.

Caldwell, quoting information from Rob Sherwood, of Conservation Services Group of Massachusetts, which conducts green building inspections, said it will cost $1 a day more to own the house versus a comparable newly constructed house ($5,000 more for the "green premium" amortized over 30 years at a 5.125-percent fixed rate mortgage), but the owner will save $2 a day in energy costs at today's rates.

"You're saving money from day one," Caldwell said. "And that's before we get into all the sustainable aspects and indoor air quality.

"I don't know why anyone would choose to build a house any differently," he said.

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PREPARED STATEMENT OF TRISHA MILLER

DIRECTOR, GREEN COMMUNITIES, ON BEHALF OF ENTERPRISE COMMUNITY PARTNERS

JUNE 30, 2010

Introduction

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

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

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

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

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

Enterprise's Green Communities initiative leverages financing and expertise to enable developers to build, rehabilitate, and maintain housing that is energy efficient and better for the environment—without compromising affordability. Over the last 5 years, Enterprise has supported the development of over 17,000 homes built according to Enterprise's Green Communities Criteria, the first national framework for environmentally sustainable affordable homes. The Criteria were developed in collaboration with and endorsed by a number of leading environmental, energy, green building, affordable housing, and public health organizations.

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

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

The Case for Green Affordable Housing

Mr. Chairman, housing and transportation costs make up the largest share of our household budgets and quickly force low-incomes families into an untenable choice between life's most basic necessities. Indeed, too many families must make the dif-

ficult choice between paying the rent and putting food on the table. According to a Low Income Housing Energy Assistance Program study, a low-income household pays 4 times as much of their monthly household income on utility payments as an average U.S. household. There are roughly 25 million very low-income households with annual incomes of $25,000 or less in the country. Roughly two-thirds of these households are renters and one-third are homeowners. For these families and individuals, the daily realities of rising energy, housing and transportation costs are intertwined.

Home energy costs have increased much faster than incomes for very low-income households in recent years, rising 33 percent since 1998. Not surprisingly, high utility bills force many very-low income households to make desperate tradeoffs. A survey of households that received Federal home energy assistance during a 5-year period found that 47 percent went without medical care, 25 percent failed to fully pay their rent or mortgage and 20 percent went without food for at least one day as a result of home energy costs.

In addition, low-income and minority communities are more likely to live in worse environmental conditions and experience greater rates of disease, limited access to health care, and other health disparities. Studies have shown that negative aspects of the built environment tend to magnify these disparities. Housing conditions in particular are important factors influencing health. Specific housing hazards include exposure to allergens that may cause or worsen asthma, lead-based paint hazards, mold, and excess moisture and indoor air quality.

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

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

Consumer and Environmental Benefits of Green Housing

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

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

Enterprise's experience through the Green Communities initiative indicates that new and existing properties that achieve 20–30 percent greater energy efficiency generate substantial cost savings from lower energy and water usage—hundreds of dollars per unit on an annual basis. This is consistent with other research on improving energy efficiency. For example, the Department of Energy reports that Energy Star-qualified single-family homes delivered $200–$400 in annual savings compared to conventional homes, with potentially substantial additional savings on maintenance. [1]

In addition, studies of home weatherization and retrofit programs captured consumer benefits beyond lower energy and water costs, including greater comfort, con-

[1] *See, www.energystar.gov/index.cfm?c=new__homes.nh__benefits.*

venience, health, safety and noise reduction. These "nonenergy benefits" have been broadly estimated by the American Council for an Energy-Efficient Economy to be worth 50 percent–300 percent of annual household energy bill savings.[2]

There is also mounting evidence that green homes are healthier. A targeted scientific study recently assessed the health impact on asthmatic children who moved into healthy green public housing at Seattle Housing Authority's High Point community. Asthma is the sixth-ranking chronic condition in Washington State and one of the leading chronic illnesses of children across the country. The homes in this study all met healthy housing criteria. After just 1 year, the results were staggering. The outcome for the asthmatic children living in these homes showed a 60 percent increase in symptom-free days and a 67 percent reduction in the use of urgent clinical care. That finding is particularly significant when you consider that the children in low-income communities are twice as likely to suffer from asthma and one in four emergency room visits nationwide is asthma related.

It comes down to a basic principle: green investments in housing have the potential to improve resident health and reduce the cost of health care. A great example of measurable health outcomes associated with green housing can be seen in the Southwest MN Housing Partnership's redevelopment of Viking Terrace in Worthington, Minnesota. The green rehabilitation of 60 apartments for people with low incomes addressed core contributors to an unhealthy living environment by meeting Enterprise's Green Communities Criteria. The National Center for Healthy Housing conducted a health assessment of the development and found improvements in health and safety across the board. One resident, Abang Ojullu, spoke of the lasting impact these health measures had on her and her children. For 2 years, Abang made the hour-long drive to Sioux Falls once a month so her daughter, Ananaya, could see a specialist for her severe asthma. But, 6 months after moving into the renovated Viking Terrace Apartments, Ananaya did not get sick once, nor did any of her five other children, though in the past each had bouts of asthma. As Rebecca Morley, executive director of the National Center for Healthy Housing, noted, "instead of paying for medical care that could have been avoided, occupants in Green Communities will be able to keep more of their income and avoid the suffering and loss associated with poor health."

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

The Energy Efficiency in Housing Act can help improve health outcomes, while protecting our natural resources and fighting climate change. Residential units consume 22 percent of the Nation's energy and cause 20 percent of our greenhouse gas emissions.[3] The 25 million units that are home to our lowest income citizens are almost one-quarter of all residential units in the country. Most of these units were built before 1980 and many were poorly constructed. Just imagine if we could rehab and retrofit all of those units. That would translate into annual carbon emissions reductions utilizing EPA's equivalency calculator of either: 60 million tons carbon dioxide (CO2), 10 million cars off the road, or nearly 400,000 acres of forests preserved.

Increasing energy efficiency in housing would address one of the most significant contributors of greenhouse gas emissions—the built environment. One recent analysis suggest that the 34 million households eligible for Federal home energy assistance generated 276 million tons of carbon dioxide emissions, 27.5 percent of total emissions from residential units overall.[4] 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.[5]

The Minnesota Green Communities program has concluded that once green affordable housing projects receiving State funding through 2008 are built, the reduction in emissions will be almost five million fewer pounds of CO2 released each year—the equivalent of the CO2 footprint of 90 to 100 average households. The En-

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[2] 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).

[3] "Income, Energy Efficiency and Emissions: The Critical Relationship", Energy Programs Consortium (February 26, 2008).

[4] *Ibid.*

[5] "Testimony of Dan W. Reicher, Director, Climate Change and Energy Initiatives, Before the Senate Committee on Finance", Google.org (February 27, 2007).

ergy Efficiency in Housing Act will amplify these outcomes, and improve health and housing conditions for vulnerable communities.

Costs and Benefits of Increasing Our National Stock of Green Housing

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

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

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

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

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

Role of Legislation

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

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

In addition to Federal leadership and public investment to transform green affordable housing, capital and innovation must come from mainstream financial institutions to make major progress, and targeted Federal incentives have an important role to play. The bill facilitates private-sector participation by offering mortgage in-

centives to reward energy and location efficient mortgages (Sections 5, 6, and 10). It would also stimulate innovation in multifamily green affordable housing by creating a competitive Energy Efficiency and Conservation Demonstration Program to green affordable homes for low-income people (Section 7).

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

Conclusion

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

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

PREPARED STATEMENT OF KENNETH GEAR

EXECUTIVE DIRECTOR, LEADING BUILDERS OF AMERICA

JUNE 30, 2010

Thank you for the opportunity to express the views of Leading Builders of America (LBA) regarding "Green Housing for the 21st Century: Retrofitting the Past and Building An Energy-Efficient Future."

LBA commends Chairman Menendez and Ranking Member Vitter for focusing on this critical issue.

Leading Builders of America is a newly formed trade group representing 16 of the Nation's largest homebuilding companies. In 2009, our members sold more than 99,000 homes in 34 States accounting for 27 percent of the new homes sold in the U.S.

LBA member companies are building green houses every day throughout the country and are active participants in voluntary energy efficiency programs like Energy Star, The Builders Challenge, and Environments for Living.

LBA member companies are committed to building an energy-efficient future. They are on the front lines of this effort and recognize the important role that housing can play in reducing energy consumption in the United States.

A prospective homebuyer looking at an energy efficient home should be facing a win-win situation. An energy efficient home is good for the environment and the homebuyer will enjoy reduced energy costs. However, while the homebuyer may value the energy efficient features of the new home, the current mortgage underwriting and appraisal process does not, and this serves as a disincentive. LBA believes that providing tools to help homebuyers pay for energy efficiency features and ensuring that those features are properly valued in appraisals must be at the heart of any legislation aimed at reducing energy consumption in homes.

LBA commends Senators Whitehouse, Bennet, Bingaman, Menendez, Merkley, Schumer, and Udall, sponsors of S. 1379, the Energy Efficiency in Housing Act of 2009, for recognizing the need to help homebuyers pay the incremental costs associated with purchasing energy efficient new homes.

S. 1379 calls for the refinement and expansion of Energy Efficient Mortgages, or "EEM's." We fully support this effort and look forward to working with the bill sponsors and members of this Committee to strengthen the concept so that it can be implemented on a timeline that is in sync with the anticipated imposition of new energy efficient mandates for new homes. Along with the Alliance to Save Energy (ASE) and the Institute for Market Transformation (IMT), we are concerned that a delay in implementing a robust energy efficient mortgage proposal would be counterproductive and would have the perverse effect of actually creating a disincentive for homebuyers to buy energy efficient homes.

LBA's analysis shows that a 30 percent mandated increase in efficiency would increase the cost of the typical new home by more $5,000; and at a 50 percent level cost would increase by an average of $15,000. These costs vary significantly depending on climate zone. Unless a strong energy efficient mortgage program is in place and universally available, homebuyers will be unable to obtain financing to cover the increased up front costs, making them more likely to purchase a less efficient home that does not have those incremental costs.

LBA believes that the effectiveness of any energy efficient mortgage program is closely linked to reforms in the appraisal process to ensure that the value of energy saving features are consistently and accurately reflected in the value of a home, and we have a proposal, based on the well-established Home Energy Rating System (HERS), that would do just that.

As Congress looks at mandates to increase energy efficiency standards for new homes, there is an opportunity to make modest changes to the mortgage underwriting and appraisal process that will give homebuyers meaningful tools needed to help pay for energy efficiency features and make the increased energy efficiency standards a success. LBA looks forward to working with the Committee and the bill sponsors to accomplish the goal of building an energy-efficient future.

Outdated Underwriting and Appraisal Standards Discourage Energy Efficiency

One of the first steps in the mortgage underwriting process is calculating the cost of homeownership. This analysis typically involves summing the total annual expenses for principal and interest and property tax and insurance premiums. This calculation is commonly called PITI and has been used by the mortgage industry for over 60 years. Conspicuously absent from this calculation is the anticipated annual energy cost for operating the home.

In our view, the current cost of homeownership test creates an incomplete picture of the actual costs associated with owning and operating a home. To illustrate this point, a recent analysis conducted by the Institute for Market Transformation (IMT) found that average energy costs exceed both insurance and property taxes. The failure to account for energy costs in mortgage underwriting is a significant deficiency that must be addressed to improve the quality of underwriting and provide an accurate picture of repayment risk.

Failing to account for energy costs in the underwriting process also has the unintended effect of discouraging consumers from purchasing energy efficient homes. Since energy costs are not factored into mortgage underwriting it stands to reason that energy savings cannot be factored in either. The result is that today's homebuyer cannot use energy savings to help offset the incremental cost associated with purchasing a home.

Of equal concern are current residential appraisal standards which do not provide for a consistent and accurate way to value energy saving features in a home. The result is that homeowners and homebuilders are discouraged from installing energy saving features since they will not be considered in the appraisal. Similarly, homebuyers are discouraged from buying homes that have energy saving features since those features are not considered in an appraisal and as a result cannot be financed in a mortgage.

Our conclusions are that any effort to increase energy efficiency in homes will not succeed unless the problems described above are addressed at a systemic level.

The Power of E

Since January, LBA has been working to develop a more robust and universally available approach for making energy efficiency affordable to consumers and ensuring that energy saving features are accurately and consistently valued in appraisals. We have partnered with The Alliance to Save Energy (ASE) and the Institute for Market Transformation (IMT) to develop specific proposal to accomplish these goals. Our plan has two components:

Update and Improve the Accuracy of Mortgage Underwriting. Mortgage underwriting criteria must be updated to include energy in the cost of ownership test. A PITI+E test would have two immediate and dramatic impacts in the marketplace. First, the quality of mortgage underwriting would improve with the addition of energy in factoring the cost of homeownership. Second, this change would encourage consumers to buy energy efficient homes by allowing energy savings to be used to offset the increased up-front cost of an energy efficient home.

This goal could be accomplished simply by using the HERS Index, a well-established and universally accepted energy efficiency standard. Using it will enable us to reach our goals of building an energy efficient future faster than waiting for another system to be developed. An equivalent rating system is also an option; how-

ever, developing an entirely new system could take considerable time and even more time to be understood and rolled out in the marketplace. This would delay efforts to encourage consumers to buy energy efficient homes.

Unlike proposals to measure other operating costs, a HERS energy assessment provides quantifiable data and is well-established and understood. HERS raters would provide their data (a "score" of 1–100) which could be used by appraisers.

Create a Uniform System for Valuing Energy Saving Features. Homebuyers, builders, appraisers and mortgage underwriters need a uniform methodology for accurately and consistently calculating the value of energy saving features in a home. This can be accomplished relatively simply by basing value on the amount of money the homeowner can expect to save through reduced energy costs over the life of the mortgage discounted to the current net present value. This methodology was devised a number of years ago by Fannie Mae as a cornerstone of their original Energy Efficient Mortgage Pilot Program.

The Fannie Mae pilot program never really took off, in part because at the time, credit was relatively easy to obtain, and as a result, there was not a real demand for the program. Tightening credit markets combined with growing foreclosures and a growing need to reduce energy consumption have changed marketplace dynamics.

Implement a Comprehensive Solution Now. Congress is considering sweeping energy legislation that could include efficiency mandates for new homes. These changes will increase the cost of new homes and in turn make them less attractive to homebuyers. However, if the mortgage and appraisal reforms described above are included in the same legislation, the added cost of energy saving features would be fully offset and appropriately valued in appraisals. In our view mortgage and appraisal reforms must be part of any legislation that mandates increased energy efficiency in new homes.

The Federal Government is currently in a unique position to drive these much needed changes through the highly fractured home building, mortgage and appraisal industries. The vast majority of new mortgages today are either insured or owned by the Federal Government. Requiring that these loans consider energy costs in the underwriting process and accurately value energy saving features would dramatically accelerate the supply of and demand for energy efficient new homes.

Thank you for taking our thoughts into consideration.

Attachment

APPENDIX: SUMMARY OF REQUIRED LEGISLATIVE CHANGES

Updating Federal Mortgage Programs To Encourage Energy Efficiency

Public Policy Goals

Reduce the amount of energy that is consumed by homes. Encourage the development of energy efficient building technologies, materials and components. Facilitate the growth of "green jobs" in the residential construction and remodeling sector.

Summary of Legislative Objectives

1. Update underwriting standards for federally insured mortgages to accurately reflect energy costs. Ensure that demonstrable operating savings are factored into underwriting to offset the incremental expense of making homes more energy efficient.
2. Adjust appraisal standards for federally insured mortgages to accurately reflect the added incremental value of energy efficiency.

Detailed Discussion—Mortgage Underwriting Standards

"Covered Agencies" are defined as Federal agencies and federally chartered entities.

"Federal Insurance" is defined as insurance provided by Federal agencies and federally chartered entities.

Direct the Administration to develop enhanced energy efficiency underwriting criteria for all federally insured mortgages as follows:

- Any mortgage underwriting system that is used to originate a federally insured mortgage must take into consideration energy costs in determining the portion of gross income that can be used to service mortgage debt.
- To facilitate this consideration, mortgage underwriting platforms must include a line item for "estimated annual energy costs."
- Annual energy operating costs shall be determined using one of two methods. A default annual estimated energy cost shall be calculated for each home and shall be based on the size of the home and on the most current version of the

Energy Information Administration's Residential Energy Consumption Survey. The default annual estimated energy cost shall be used when an energy efficiency report is not provided.

- An energy efficiency report may be supplied by the buyer or seller. Such a report shall be prepared by a qualified third-party and include an estimate of annual energy costs specific to the home being purchased. If an energy efficiency report is provided, it shall be used as the basis for estimating annual energy costs.
- The criteria for calculating the cost of homeownership, (principal, interest, taxes, and insurance) shall be expanded to include energy costs. Qualifying income ratios shall be adjusted accordingly. If an energy efficiency report is provided, it shall be used as the basis for estimating annual energy costs. In consultation with DOE, EPA, and Covered Agencies, the Department of Housing and Urban Development (HUD) shall study the feasibility of adding water costs and location-based transportation costs to mortgage underwriting calculations. HUD shall report back to Congress within 18 months of enactment. Covered agencies shall fully cooperate in this analysis.

Safeguards and Limitations

- Any Federal mortgage insurance program subject to this act shall be prohibited from modifying other underwriting criteria so as to negate any benefit that results from the use of enhanced energy efficiency underwriting criteria.
- Covered Agencies are prohibited from imposing greater buy back requirements or credit overlays on loans that utilize enhanced energy efficiency underwriting criteria.
- Covered Agencies are prohibited from adding additional private mortgage insurance premiums for loans that utilize enhanced energy efficiency underwriting criteria.
- Enhanced energy efficiency underwriting criteria may be used for both new and resale homes and shall be available for all housing types that would normally qualify for Federal insurance.

Detailed Discussion—Appraisal Standards

Direct the Administration to develop enhanced energy efficiency appraisal guidelines for all federally insured mortgages as follows:

- Appraisals used to underwrite federally insured mortgages must include a line item that quantifies annual energy costs.
- An energy efficiency report prepared by a qualified third-party may be supplied by the buyer or seller. Such a report shall include an estimate of annual energy costs specific to the home being purchased. If an energy efficiency report is provided, it shall be used as the basis for estimating annual energy costs.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR VITTER FROM RON SIMS

Q.1. It was stated that utility costs within HUD's budget were an area where "significant cost savings are possible." While you gave very specific information regarding the increasing costs of utilities, the methods for achieving these savings were vague at best. What "greening" methods will be employed to achieve these savings?

A.1. Answer not received by time of publication.

Q.2. The Energy Efficiency in Housing Act of 2009 would require the Department of Housing and Urban Development to develop mortgage incentives for homebuyers—such as waived fees and lower interest rates—to finance purchases of energy efficient homes and home improvements. Many people believe affordable housing goals and government mandated subprime lending played a major role in the financial crisis. Would it be considered unwise to increase such loose lending practices at a time when we are still uncertain of their effects?

A.2. Answer not received by time of publication.

Q.3. This legislation we are discussing today amends the United States Housing Act of 1937 to prohibit the Secretary from making a site revitalization grant unless the applicant's proposed revitalization plan meets specified Green Developments requirements. Yet these standards can be a broad as "criteria as the Secretary determines to be appropriate," going as far as requiring "improved indoor and outdoor environmental quality through . . . acoustics." Should it be the Government's responsibility to ensure that new housing projects sound pleasant to its residents? And how do the acoustics of a home impact its sustainability or green qualities?

A.3. Answer not received by time of publication.

Q.4. A major focus of your testimony was that green housing would provide health benefits. However, the only example you cited was that buildings with less mold that may help decrease asthma symptoms. What are the tangible plans for improving health of citizens through green building projects?

A.4. Answer not received by time of publication.

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

LETTER AND COMMENTS FROM STEWARDS OF AFFORDABLE HOUSING FOR THE FUTURE

June 30, 2010

The Honorable Senator Robert Menendez
Chair, Senate Banking, Housing and Urban Affairs Subcommittee on Housing, Transportation, and Community Development
528 Hart Senate Office Building
Washington, DC 20510

The Honorable Senator David Vitter
Ranking Member, Senate Banking, Housing and Urban Affairs Subcommittee on Housing, Transportation, and Community Development
516 Hart Senate Office Building
Washington, DC 20510

Dear Senator Menendez and Senator Vitter,

SAHF is proud to support S.1379, the Energy Efficiency in Housing Act of 2009. We are grateful to you both, your staffs, to Senator Whitehouse and his staff, and to the other members of the Subcommittee on Housing, Transportation, and Community Development for their leadership and continued efforts in this important work. The issue of environmentally friendly development and renovation addresses important economic, energy, environmental, and health challenges. Your work reflected in the Act represents real and bold steps towards tackling these challenges.

Attached please find our comments and statement of support on the Energy Efficiency in Housing Act of 2009, for inclusion in the record of your hearing on the Act. We have not included in our comments a number of technical items which we look forward to providing in further detail to your staffs.

Yours very truly,

William C. Kelly, Jr.
President, SAHF

cc: The Honorable Senator Sheldon Whitehouse

Stewards of Affordable Housing for the Future (SAHF) is a nonprofit organization consisting of nine social enterprise nonprofit Members which own and operate over 85,000 affordable rental homes in 50 States, the District of Columbia, Puerto Rico and the Virgin Islands. SAHF Members utilize annual operating budgets over $400 million. As nationally focused nonprofits, SAHF Members possess expertise in developing, financing, and operating affordable housing across the country. Energy efficiency in multifamily rental buildings is a critical issue to both HUD and our members. By SAHF's calculations, hundreds of millions of dollars are spent unnecessarily each year on energy which could be conserved with cost-effective energy efficiency renovations. Unfortunately, market, regulatory, and subsidy constraints have deterred the necessary investment, and only modest sums from the American Recovery and Reinvestment Act (ARRA) have been invested in retrofitting affordable rental housing.

We thank you for the opportunity to comment on the Energy Efficiency in Housing Act of 2009. This Act represents an important set of steps toward a solution to this national problem, and SAHF is proud to support it. We are particularly pleased by the inclusion of Section 7 in the Act, the "energy efficiency and conservation demonstration program," which would enhance the energy efficiency of 50,000 federally assisted units through a targeted, leveraged subsidy. This program would help alleviate barriers that currently make energy efficiency renovation unnecessarily difficult in multifamily buildings.

The Pressing Need for Action

Tens of billions of dollars are spent each year paying utility bills in multifamily residential buildings. Significant economic savings—easily hundreds of millions of dollars each year—could be realized by making simple, cost-effective renovations to increase the efficiency of energy use in these buildings. These renovations, coupled with green building practices that call new construction up to the highest standards of modern design and technology, would save money, have important health and environmental benefits, and contribute to the long-term effort to combat global climate change. SAHF supports the mission of greening new construction. Targeting existing buildings is also critical because a substantial portion of the buildings of the future have already been built: over 50 percent of the residential structures that will be in use in the year 2030 are standing today. Assisting existing rental buildings is critical because nearly two-thirds of very-low income households—those who need relief from rising utility prices the most—live in rental units. This problem is not just economic, but environmental: energy use in buildings accounts for approximately one-third of energy-related global greenhouse gas emissions, and 20.5 percent of carbon emissions in the United States are due to current residential energy use.

HUD alone spends more than $5 billion a year on direct and indirect subsidy of utility bills for multifamily housing. In addition, tenant utility payments and the utility bills of properties assisted under the Low Income Housing Tax Credit program (not paid by HUD) add billions of dollars to the utility bill for federally assisted housing. HUD's Energy Action Plan estimated that reducing energy bills by just 5 percent would save the department $200 million annually, and analysts believe savings of 25 percent or more may be possible.

Addressing these costs and inefficiencies requires investment, and fortunately most major energy efficiency renovations are projected to pay for themselves in 3 to 10 years by saving an amount in energy costs equal to or greater than their price. However, because nearly all multifamily projects have existing loans, taking out new loans to pay for energy efficiency improvements generally requires agreements between the new lender and the existing lender to ensure all parties are protected in the case of default or foreclosure. For loans of a few hundred thousand dollars, legal fees related to negotiations between creditors, or simply the cost of drafting complex legal documents, would quickly consume an unacceptable share of the savings energy efficiency improvements could produce. Adding the delay and restrictions inherent in a closely regulated context puts these loans even further beyond the reach of federally assisted buildings.

Private capital also has other reasons to be hesitant. First, many multifamily buildings that could realize substantial energy efficiency savings have not been analyzed by an engineer to identify which improvements are most needed: this information cost artificially limits demand in the market. Second, no large, representative multifamily portfolio has tested these projections and established a proven investment model for the industry. Although some small portfolios and individual buildings have experienced dramatic energy savings, doubts remain about the applicability of these results to all types of buildings in varying climates across the country.

Finally, in federally assisted buildings, rents and utility payments are typically set by formula. While owners of market-rate multifamily buildings can pass the initial cost of energy- and cost-saving improvements to consumers, owners of federally assisted buildings face split incentives. When residents pay utilities, these owners stand to receive no help paying for the initial cost of improvements, yet future economic benefits would be realized only by residents. When owners pay utilities, residents have no incentive to conserve energy. As a result, the common practice has been to build for low initial cost rather than minimizing energy costs over the building's lifetime. These split incentives have led to lower efficiencies and higher costs than necessary throughout the HUD-assisted portfolio.

SAHF Strongly Supports the Energy Efficiency in Housing Act of 2009

SAHF is proud to support the Energy Efficiency in Housing Act. The Act will focus important Federal attention and resources on making neighborhoods, and the built spaces that give them structure, better places to live. SAHF also continues to strongly support this Act's companion in the House, H.R. 2336—the GREEN Act. SAHF has worked with members and staff in the House since the GREEN Act's introduction in 2009 to ensure that the legislation meets its stated project goals and is happy to provide similar support to the Energy Efficiency in Housing Act. SAHF is pleased that both the GREEN Act and the Energy Efficiency in Housing Act promote bold steps to promote energy efficiency and conservation in American buildings.

In particular, SAHF strongly supports the energy efficiency and conservation demonstration program for existing multifamily affordable housing projects, embodied currently in Section 7 of the Act. This demonstration program will prove the benefits that reasonable energy efficiency improvements can have from financial, environmental, health, and energy security perspectives. When these investments begin to pay back their own cost, we know this program will lead to the identification of many more than the initial 50,000 units of affordable housing in which similar progress can be made. A wide application of the energy difference could have significant impacts on the Federal Government's utility costs, reduce costs for preservation owners and tenants, and move the Nation forward in energy independence and climate security.

Furthermore, SAHF supports paragraph (i) of Section 7, which would authorize appropriations for the demonstration program. We support including an authorization for each year the program operates, at the $50 million level. We also support the reporting requirements of paragraph (g) of Section 7.

SAHF supports the Act's changes to Fannie Mae and Freddie Mac: granting additional credit for meeting the standards set forth in Section 8, granting authority to introduce additional liquidity to the issuance of Energy-Efficient Mortgages (EEMs), and creating mandates to promote EEM and Location-Efficient Mortgage use. SAHF also supports granting Community Reinvestment Act credit for energy efficient mortgages and green building efforts, collecting related information under the Home Mortgage Disclosure Act, and the establishment of Green Banking Centers.

SAHF also supports the concept of an energy loan designed to enhance energy efficiency and conservation in different federally assisted projects, with financial benefits shared by the project owner. These programs will help address the problem of split incentives which I mentioned above.

SAHF is supportive of increased sustainability in HOPE VI development delineated in the bill. SAHF also supports the measures designed to increase funding for rural housing, to encourage greater involvement from financial players, and to enhance the ability of the Federal Government to study and administer efforts to bring energy efficiency to the American home, whatever its form.

SAHF recognizes the critical long-term importance of acknowledging energy efficiency improvements in appraisals. We strongly support Section 16 of the Act, and hope that the appraisal industry will adopt the concept more widely as an important change that would more accurately reflect properties' value. The incentive to install energy efficiency improvements is substantially reduced as long as appraisals fail to reflect the value to future owners of energy efficiency improvements and consequent energy savings.

At properties across the portfolio of SAHF's Members, SAHF's energy efficiency initiatives and other similar efforts raise the awareness of local staff and residents to the importance of energy efficiency measures and the potential for substantial savings. Education and outreach—whether to building staff, HUD development partners, or lenders—are essential elements of a plan which will make effective and lasting steps toward energy efficiency and greener neighborhoods. SAHF supports the related provisions of the Act.

Finally, SAHF is supportive of the concept embodied in the proposed revolving loan fund set forth in Section 19 of the Act. Providing additional money to finance renewable energy and energy efficiency improvements in single-family and multi-family residences is clearly an issue of national importance with economic, energy, and environmental benefits. Providing greater flexibility in financing and overcoming barriers posed by information inefficiencies and administrative costs is an appropriate role for Federal, State, and local governments.

Thank you again for the opportunity to make these comments.

PREPARED STATEMENT OF THE AMERICAN INSTITUTE OF ARCHITECTS

Introduction

The American Institute of Architects (AIA) strongly supports the Energy Efficiency in Housing Act (EEHA) (S. 1379). 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. In addition, this legislation would create as many as 84,500 jobs in the design and construction sector in the first year alone, helping to accelerate the economic recovery.

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 25 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. 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.

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 5 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 residen-

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[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*

tial 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 has 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 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 Green Benefits of EEHA

The legislation (S. 1379) 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 (HUD).

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 multifamily 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 multifaceted approach is necessary. EEHA 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, meanwhile, 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 increase their commitment to EEMs and LEMs and creates 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.

As stated above, this bill represents Congress's most comprehensive effort to promote energy efficiency across the residential sector of our Nation's buildings, using a multifaceted and multiprofessional approach that integrates all players in the residential building field in the process of building and retrofitting energy efficient housing. For example, the bill includes provisions that will require appraisers to consider renewable energy sources for or energy efficiency improvements to the property being appraised. This provision will ensure that the energy efficiency achievements that designers and builders accomplish will be valued in the price of the home. This is a necessary step that will in time, change the way our Nation thinks about energy use and will result in energy savings across the economy.

The Economic Impact of EEHA

This legislation not only will foster more energy efficient homes; it will create jobs. As a result it could not come at a better time. The current economic crisis has affected every American, but the impact of this recession on the design and construction industry has been simply devastating.

According to the U.S. Department of Labor, the unemployment rate in the construction industry in March 2010 was 24.9 percent, the highest by far in any industry.[5] The Associated General Contractors of America (AGC) reports that in the last year, 48 out of 50 States and the District of Columbia lost jobs in the construction industry.[6] This situation has major impacts on the economy as a whole, as this industry accounts for nearly one in nine dollars of Gross Domestic Product.[7]

The Labor Department reports that employment at architectural firms has dropped by 18 percent between 2008 and 2009.[8] That is only counting those who have applied for unemployment insurance. Many architects report being underemployed or working without pay for as long as 18 months. That is an enormous burden for skilled workers who have families to feed and mortgage bills to pay. Worse, many young architects are simply leaving the profession, looking for opportunities elsewhere. Once economic conditions improve, a dearth of young talent will hamper the ability of our country to design and construct high-quality buildings for years.

Although economists believe the country has entered a recovery phase, the good news has not reached the design and construction industry. The AIA Architecture Billings Index (ABI), which surveys work on the drawing boards, is a leading indicator of construction activity 9 to 12 months down the line.[9] The most recent ABI shows continued weak demand for architectural work than the month before. This means that the construction industry should expect soft demand for its service for the next 9 to 12 months. Clearly, the green shoots of economic recovery are not bearing fruit in this important sector.

The AIA supports legislation that puts architects and other design and construction personnel back to work. That is why the AIA is pleased to note that in its analysis (Attachment A) of EEHA, it found that the legislation would crate as many as 84,500 jobs in this sector in the first year alone. Promoting energy efficient housing not only lowers energy bills and improves our Nation's energy independence; it also can help accelerate our economic recovery.

The AIA strongly supports 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, preserve our natural environment, and create much-needed jobs in the design and construction industry.

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[5] *http://www.bls.gov/news.release/pdf/empsit.pdf*
[6] *http://www.agc.org/cs/news_media/press_room/press_release?pressrelease.id=568*
[7] 7 U.S. Census Bureau and Bureau of Economic Analysis.
[8] Bureau of Labor Statistics.
[9] *www.aia.org/aiaucmp/groups/aia/documents/pdf/aias076074.pdf*

Attachment A

Rebuild and Renew:

The Impact on Job Creation in the Building Industry of the Energy Efficiency in Housing Act

June 24, 2010

Summary

Energy legislation currently before Congress presents an opportunity to invest in the sustainability of buildings, which according to the U.S. Department of Energy, accounts for nearly 70 percent of U.S. electricity consumption.[1] They also create jobs for a wide range of professions, from architects and engineers to construction managers, contractors, carpenters, HVAC specialists, and others.

This analysis explores the job creation potential of the Energy Efficiency in Housing Act (EEHA) of 2009 (S. 1379). Although precise numbers for job creation are imprecise due to the challenges in determining actual funding levels and their impact on employment in the real world, using existing studies and data, this study concludes that EEHA could create or save as many as 84,500 jobs in the building design and construction industry per year.

Introduction

On June 25, 2009, Sen. Sheldon Whitehouse (D-RI) introduced S. 1379, the Energy Efficiency in Housing Act (EEHA).[2]

EEHA includes numerous provisions that would provide incentives and programmatic changes at the Department of Housing and Urban Development (HUD) that would make the nation's housing stock more energy efficient. These provisions not only will contribute to a reduction in greenhouse gas emissions caused by the built environment; they also will create or preserve thousands of jobs in the building design and construction industry.

The American Institute of Architects' plan for economic recovery (www.aia.org/rebuildandrenew) calls for investments in infrastructure that create greener buildings, vibrant communities, and a 21st century transportation network that is good for both the environment and economy. The AIA believes that investing in such projects will create both jobs and reduce energy consumption from the built environment.

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1 http://buildingsdatabook.eren.doe.gov/docs/xls_pdf/1.1.9.pdf

2 Companion legislation, the Green Resources for Energy Efficient Neighborhoods (GREEN) Act (H.R. 2336), was introduced in the House by Reps. Ed Perlmutter (D-CO) and Judy Biggert (R-IL), also in 2009.

This study analyzes the potential impact of job creation in the building design and construction sectors from EEHA.

Analyzing the Data

In order to measure the potential job creation impact of EEHA on the building design and construction sector, it is necessary to first analyze the amount of funding that could potentially be invested in energy efficiency and renewable energy retrofits via the legislation; and then calculate the potential number of jobs that would be created or preserved from this investment.

There are certain limitations to this approach. First, actual funding amounts are dependent on the annual appropriations process, and it is often the case that appropriations do not match the authorized amount.

Second, there is no clear consensus on how investments in building projects, particularly retrofits, create jobs. This study bases its estimates on a 2009 study by the Center for American Progress and the Political Economy Research Institute[3] that found that every $1 million spent on retrofits creates 16.7 direct, indirect, and induced jobs.

Building-Related Funding in EEHA

Several provisions within EEHA authorize funding for the design, construction, and/or retrofit of buildings, including:

- *Energy Efficiency and Conservation Demonstration Program (Sec. 7).* Sec. 7 establishes an energy efficiency and conservation demonstration program for multifamily housing projects assisted with project-based rental assistance.

- *Alternative Energy Sources State Loan Fund (Sec. 19).* Sec. 19 authorizes HUD to provide loans to States and Indian tribes to provide incentives to owners of single-family and multifamily housing, commercial properties, and public buildings to provide renewable-energy sources, energy-efficiency and energy-conserving improvements, and features for such structures, or infrastructure related to the delivery of electricity and hot water for structures lacking such amenities.

- *Sustainable Low-Income Community Grant Program (Sec. 20).* Sec. 20 authorizes the Secretary of HUD to make grants to nonprofit organizations to use for a number of activities, including training, supporting, and providing financing to eligible community development organizations and qualified youth service and conservation corps in improving energy efficiency.

3 http://www.americanprogress.org/issues/2009/06/pdf/peri_report.pdf

EEHA Act Authorization Levels

Section	Provision	Annual Authorization
7	Multi-Family Residential Demonstration Program	$50,000,000
19	Alternative Energy Sources State Loan Fund	$5,000,000,000
20	Sustainable Low-Income Community Grant Program	Such sums as may be necessary

Potential Job Creation in the Building Industry

Based on the figures above, it is possible to establish a potential range of job creation from EEHA.

As stated earlier, this study uses figures from *The Economic Benefits of Investing in Clean Energy*, a 2009 study by the Center for American Progress and the Department of Economics and Political Economy Research Institute at the University of Massachusetts, Amherst. This study found that every $1 million spent on building retrofits creates 16.7 direct, indirect and induced jobs.[4]

Based on the above job creation figures and allowable uses for EEHA authorizations, it is possible to develop an estimate of potential job creation in the building industries based on these EEHA provisions.

EEHA Potential Job Creation

Provision	Jobs From Retrofits[4]
Multi-Family Residential Demonstration Program	835
Sustainable Low-Income Community Grant Program5	167
Alternative Energy Sources State Loan Fund	83,500
Total	**84,502**

Conclusion

Although it is difficult to precisely predict job creation that will arise from legislation such as EEHA, based on existing research and data, it is clear that the major building-related, energy-efficiency provisions in the bill will have a significant impact on job creation and retention in the design and construction industries.

The large job creation potential per dollar invested in energy-efficient building design, construction, and renovations – combined with the sizable potential for energy savings from

4 http://www.americanprogress.org/issues/2009/06/pdf/peri_report.pdf
5 Based on authorization level in H.R. 2336

building efficiency measures – suggests that passage of energy legislation like EEHA will help policymakers achieve the twin goals of sustainability and economic development.

For more information, contact the AIA Federal Relations Team at 202-626-7438 or govaffs@aia.org.

PREPARED STATEMENT OF ROGER PLATT, SENIOR VICE PRESIDENT, GLOBAL POLICY AND LAW, U.S. GREEN BUILDING COUNCIL

On behalf of the U.S. Green Building Council's (USGBC) nearly 17,000 organizational members and 80 local chapters, I would like to thank Chairman Menendez and Ranking Member Vitter for convening a hearing on the important issue of green housing and "The Energy Efficiency in Housing Act" (EEHA). The U.S. Green Building Council is proud to have included EEHA earlier this year in the USGBC "Top 10 Pieces of Green Building Legislation" Scorecard and look forward to working with the Committee to ensure swift passage of the bill.

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 percent of U.S. CO2 emissions per year.[1] In addition, buildings annually account for 39 percent of U.S. primary energy use;[2] use 13.6 percent of all potable water or 15 trillion gallons per year;[3] and consume 40 percent 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 Energy Efficiency in Housing Act (S. 1379) makes important and 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 and establishing mortgage incentives for energy efficient multifamily housing (Sections 5–6);
- Supporting States and Indian Tribes in their efforts to improve efficiency and generate clean energy in homes and buildings through the establishment of the Alternative Energy Sources State Revolving Fund within the Dept. of Treasury (Section 19);
- Providing needed education to consumers and lenders about the benefits of energy efficiency through green banking centers (Section 22); and
- Empowering the private market to move further and faster by advancing the Federal commitment to green and energy efficient affordable housing (Sections 4, 15, and 16).

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 Energy Efficiency in Housing 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.

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[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.

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 percent 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 percent of annual income on home energy costs, while the average for median-income households is just 4.6 percent. 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 percent 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 percent to the initial construction cost, but the owner reports that in its first 2 years of operation the LEED certified building produced an impressive 26 percent savings on electricity and 41 percent savings on gas.

Public housing agencies have experienced similar successes. Over the past 3 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 percent, 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 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 EEHA provides HUD with the needed congressional authority to develop such an initiative.

USGBC commends Senator Whitehouse for his leadership in introduction of S. 1379, or EEHA. We are committed to advancing policy that will efficiency of public housing and that will begin the necessary transformation of the home mortgage market to encourage and value efficiency. EEHA would save energy, taxpayer dollars, and maintain affordability in our Nation's housing stock. We look forward to assisting the Committee in swift passage of the bill, and are happy to work with the Senator and the Committee on making the attached recommendations for S. 1379.

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[7] Harvard University Graduate School of Design, Public Housing Operating Cost Study, June 2003 available at *www.gsd.harvard.edu/research/research_centers/phocs/documents/Final%20Report.pdf.*

[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 *www.nliec.org/facts.pdf.*

[9] U.S. Government Accountability Office, Green Affordable Housing, GAO-09-46, October 2008, available at *www.gao.gov/products/GAO-09-46.*

[10] Presentation by the DC Housing Authority at D.C. HUD Field Office Energy Forum, March 18, 2009.

[11] GAO, Green Affordable Housing, p. 15.

Attachment: USGBC Comments on The Energy Efficiency in Housing Act (EEHA), S. 1379

The U.S. Green Building Council Recommends that:

Section 3(3)(C)(ii) on Definitions of Green Building Standards be revised to include the LEED for Neighborhood Development rating system.

Section 3(3)(C)(i) be revised to include the phrase "and rehabilitation" in the reference to Green Communities, so that the provision reads: "The national Green Communities criteria checklist for residential construction *and rehabilitation,* which provides criteria for the design."

Section 2(b)(1) on Purposes be adjusted to include the phrase "sustainable practices" to reflect the many opportunities presented by green building, so that the provision reads: "To encourage the use of energy efficiency, and conservation methods, *and sustainable practices* in Federal housing programs."

Similarly, Section 7(b) on Energy Efficiency and Conservation Demonstration Program for Multifamily Housing Projects goals be revised to reflect the energy saving and cost-saving opportunities of green building practices such as water conservation [1] as follows:

- 7(b)(3) reads: encourages energy efficiency, and conservation, *and sustainable practices* by owners and residents of multifamily housing projects and installation of renewable energy improvements, such as improvements providing for use of solar, wind, geothermal, or biomass energy sources;
- 7(b)(4) reads: creates incentives for project owners to carry out such energy efficiency *and water efficiency* renovations and improvements by allowing a portion of the savings in operating costs resulting from such renovations and improvements to be retained by the project owner, notwithstanding otherwise applicable limitations on dividends;
- 7(b)(6) reads: promotes the installation, in existing residential buildings, of energy *and water* efficient and cost-effective improvements and renewable energy improvements, such as improvements providing for use of solar, wind, geothermal, or biomass energy sources;
- 7(b)(9) reads: creates a database of energy efficiency and conservation, and renewable energy, techniques, energy savings management practices *that include consideration of indirect energy usages such as water use and transportation and resident behavior and environmental control factors;* [2] and energy efficiency and conservation financing vehicles.

Section 7(c)(4) on the Secretary's authority in carrying out the demonstration program be revised to reflect the goals of this bill to maintain affordability so that the provision reads, "Waive or modify any existing Federal regulatory provision that would otherwise impair the implementation or effectiveness of the demonstration program under this section, including provisions relating to methods for rent adjustments, comparability standards, maximum rent schedules, and utility allowances, *keeping with the intention that assisted families pay no more than 30 percent of gross annual income in rent plus utilities.* Notwithstanding the preceding provisions."

(This recommendation seeks to preempt an unintended impact of 7(c)(4) where in carrying out the demonstration project, owners of rental housing may charge additional rent for rent-restricted units based solely on projected utility savings. If these projections are overly optimistic or simply incorrect, residents may end up shouldering the additional costs.)

Section 15(a)(4)(C)(i) on HOPE VI, identification of green building rating systems, be revised to minimize confusion and to include a reference current law, The Energy Independence and Security Act of 2007 (Public Law No: 110-140) as it directs identification of a green building rating system for Federal buildings, so that the provision reads: "IN GENERAL—For purposes of this paragraph, the Secretary, in consultation with the Secretary of Energy, shall identify rating systems and levels for green buildings that the Secretary determines to be the most likely to encourage a comprehensive and environmentally sound approach to ratings and standards for green buildings, *with consideration of the findings of Public Law 110-140 as it pertains to green Federal buildings in that determination.*"

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[1] According to the EPA, if one out of every 100 homes in the U.S. were retrofitted with water-efficient fixtures, we could save 100 million kWh of electricity per year—the GHG reduction equivalent of removing nearly 15,000 automobiles from the road.

[2] HUD is already collecting data on occupant comfort and control in multifamily housing through the Green Initiative of the Mark to Market Program.

Section 15(a)(4) on HOPE VI, green developments requirements be revised to reflect consistency with the efficiency standards for residential and nonresidential construction as specified by this Act in sections 3(6)(B) through 3(6)(C).

(Section 15 should apply equally to the HOPE VI program and to the Administration's Choice Neighborhoods Initiative, and this clarification may be useful in report language.)

Inclusion of S. 2897, The Energy Efficiency Modernization Act of 2009 introduced by Senator Bennet in this Act. The legislation is supported by USGBC and a coalition of affordable housing groups and would encourage owners of assisted multifamily rental housing projects to undertake utility cost-saving measures by providing loans funded from residual receipts already associated with the projects.

PREPARED STATEMENT OF LEANNE TOBIAS, MANAGING PRINCIPAL, AND MARTHA PASCHAL, MANAGING DIRECTOR, MALACHITE LLC

Malachite LLC is a boutique, woman-owned green real estate advisory company headquartered in Bethesda, MD. Our company works with developers, real estate funds, nonprofit organizations and Government entities on sustainable building matters. Our multidisciplinary team includes professionals drawn from the fields of architecture, construction management, engineering, development, property operations, investment, and finance.

Our company works with clients on all aspects of green real estate development and retrofit, including:

- Green project retrofit, development, and certification
- Finance, tax, and investment advisory
- Leasing and building operations
- Policy and program development
- Research and education

Our team members are experienced with single-family and multi-family green housing, including market rate, mixed-income and affordable projects, and with diverse commercial real estate. We are the author of the "U.S. green building finance study of the Commission for Environmental Cooperation", a U.S.-Canada-Mexico trilateral commission, as well as the Urban Land Institute's new book, "Retrofitting Office Buildings to be Green and Energy-Efficient." We were recently selected to help write the building retrofit guidance for Federal agencies under the Energy Information and Security Act of 2007.

Members of our staff serve on numerous Government and industry leadership groups for green building. Among them: the U.S. Department of Energy's Commercial Building Initiative, the U.S. Environmental Protection Agency's Environmental Finance Advisory Board, ASTM's Building Energy Performance Assessment Task Group, and the advisory board of the Green Building Finance Consortium.

We appreciate the opportunity to submit this statement on S. 1379, the Energy Efficiency in Housing Act (EEHA). This legislation helps to establish new mechanisms that would accelerate market development and deploy private capital for green housing, and support additional growth in the commercial sector. Among these transformative provisions are:

- The establishment of incentives for energy-efficient and location-efficient mortgages and for the construction of energy-efficient single- and multi-family housing under the National Housing Act.
- The development of an energy-efficiency and conservation demonstration program for 50,000 units of multifamily housing over a 4-year period. The program will test the efficacy and establish a database on a variety of renovation techniques.
- The development of an assisted housing pilot loan program for energy-efficiency.
- The amendment of the Home Mortgage Disclosure Act of 1975, to collect information on lending for energy-efficient and location-efficient mortgages.
- The establishment within the U.S. Treasury Department of an Alternative Energy Revolving Fund, with authorization for $5 billion in loan capital.
- The establishment of an energy-efficiency credit as a component of Fannie Mae and Freddie Mac housing goals.
- The establishment of appraisal guidelines under the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) to require consideration of the

effect on real estate value of renewable energy savings and energy-efficiency or energy conservation improvements or features.

- The establishment of energy-efficiency outreach programs and, within federally insured financial institutions and credit unions, green banking centers, to educate consumers on energy-efficient retrofit practices and financing alternatives.
- Initiatives to encourage the use of energy-efficient and renewable features for home construction in rural areas and in distressed communities.

There is strong reason to implement these provisions of S. 1379. Planning experts estimate that 75 percent of current building stock will be in place for the next 50 years, so green and energy-efficient retrofits are a critical component in maintaining the quality and functionality of the U.S. housing supply.

Controlling energy costs is also a critical component of housing affordability. Rent restricted housing is especially hard hit by rising energy prices, such as the uncontrollable expense swings suffered when energy prices increased several years ago. The need to conserve energy is particularly important for those affordable rental projects which, unlike project-based Section 8 housing which can have budget-based mechanisms to absorb unexpected expense increases, are encumbered with rent restrictions and lack the mechanisms to absorb energy cost increases. Indeed, energy cost increases have a disproportionate impact on moderate- and lower-income families. The inability to afford energy cost increases has been a significant factor in evictions from U.S. public housing during periods of rapidly escalating energy prices.

As well, the U.S. lags the European Union and a number of Asian economies in the development of renewable energy technologies for the building sector. Investment and innovation in residential energy efficiency and renewable energy is also an investment in American competitiveness.

In sum, enactment of S. 1379 would improve the quality, functionality and affordability of housing in the United States, which enhancing American competitiveness in the development of building features related to energy economy and the use of renewable energy.

Retrofit and Lending Programs. S. 1379 is also beneficial in that it provides for the development of pilot retrofit and lending programs that will assist the private sector identify the most cost-effective housing retrofit and loan underwriting approaches. These initiatives, along with the bill's Revolving Loan Fund for States and Indian tribes, will help the retrofit industry mature, support economic stimulus, and provide lenders with the data and models needed to develop new energy retrofit programs. We notice that the pilot lending program proposed under S. 1379 is restricted to participation by 3–5 lending institutions. In order to ensure that one or more smaller or rural institutions participates in the pilot study, it might be appropriate to consider increasing the number of lending institutions in the pilot program, or requiring that the 3–5 lending institutions include at least one smaller or rural-based financial institution. Residents in rural housing can be disproportionately impacted by high energy costs, as job availability and thus income levels cannot absorb large fluctuations in energy pricing. This is a problem seen in tribal areas, with the prevalence of poor-quality construction.

An additional class of lenders and properties to add to the pilot programs might be Low-Income Housing Tax Credit (LIHTC) properties financed by lenders under the Community Reinvestment Act (CRA). HUD's most recent survey (as of 2007) of the Low-Income Housing Tax Credit (LIHTC) portfolio, showed that the private sector has successfully developed 30,000 properties with over 1.843 million units with LIHTC support. Community Reinvestment Act-motivated lenders and investors are by far the larger providers of LIHTC financing. Most of the LIHTC portfolio are vulnerable to increases in energy costs, and must navigate complex approval processes and transaction structures to engage in energy efficiency retrofits. LIHTC properties would very much benefit from green and energy-efficient retrofits, and should be included in the pilot programs included in S. 1379. We recommend that LIHTC properties and one or more lenders engaged in CRA lending and investing be included in the pilot programs.

Secondary Mortgage Market Provisions. Another provision of S. 1379 that should help move the housing market toward energy-efficiency is the incentive for Fannie Mae and Freddie Mac to underwrite energy-efficiency loans in fulfillment of their housing goals. Additional participation by Fannie Mae and Freddie Mac in the energy retrofit market for single- and multi-family housing would accelerate lenders' provision of retrofit loans. In this context, the Senate also might consider inserting a provision in S. 1379 that would direct the Federal Housing Finance Agency to require Fannie Mae and Freddie Mac to develop underwriting standards permitting their participation in property-assessed clean energy (PACE) programs. PACE pro-

grams, developed to mainstream energy-efficient lending, have been a significant focus of the American Recovery and Reinvestment Act (ARRA) and have been enacted or authorized by numerous local or State governments. In the absence of underwriting standards, Fannie Mae and Freddie Mac have refused to participate in PACE programs as the superior PACE lien takes priority over their first-lien mortgages. Attention to this issue is advisable to further encourage Fannie Mae and Freddie Mac to engage in energy-efficient lending and cooperate with State and local governments on this front.

Home Mortgage Disclosure Act. We strongly support the amendment of the Home Mortgage Disclosure Act to track the incidence of energy-efficient lending, as provided for in S. 1379. Lenders have been utilizing the Home Mortgage Disclosure Act for over 30 years to develop meaningful statistical data about their lending practices. In light of the importance of energy-efficiency to U.S. economic welfare and energy security, it is appropriate to amend the Act to encompass energy-efficient lending.

Appraisal, Consumer Outreach, and Green Banking Centers. Another beneficial provision of S. 1379 is the development of energy-related appraisal standards for FIRREA transactions. The enactment of appraisal standards that explicitly recognize the impact on value of renewable energy and energy-efficient features will help to mainstream the retrofit, development and financing of sustainable real estate throughout the U.S. Additional aspects of S. 1379 that will encourage broad-based private sector development of green and energy-efficient mortgage programs are the consumer outreach and education and green banking center portions of the bill. Together, these provisions help the real estate industry and the financial services sector develop the standards and practices that will support energy retrofits and associated lending programs.

Conclusion. S. 1379, the Energy Efficiency in Housing Act, enhances the functionality, quality and affordability of the U.S.'s housing stock. The legislation also encourages American competitiveness in the development of the building retrofit products and services for domestic and global markets. As well, the Act supports building retrofit and lending programs, including important pilot initiatives that will provide models for private investment in building retrofits and associated financial products. By encouraging the private sector to develop new retrofit approaches and financing products, S. 1379 will support economic growth and energy independence.

As a leader in the green building industry, Malachite LLC appreciates the opportunity to submit this statement in support of S. 1379.