

**Statement of Tony Crasi, on behalf of
the National Association of Home Builders**

“The Energy Savings and Industrial Competitiveness Act of 2011”

Senate Committee on Energy and Natural Resources

June 9, 2011

On behalf of the 160,000 members of the National Association of Home Builders (NAHB), I am pleased to testify today on S. 1000 – *The Energy Savings and Industrial Competitiveness Act of 2011 (ESICA)*. My name is Tony Crasi, I am owner and founder of The Crasi Company and I have been designing and building custom homes in the surrounding Akron, Ohio area for the past 24 years. I am a builder, remodeler, graduate architect, and licensed energy rating professional. NAHB represents the single and multifamily home construction and development, light commercial construction, remodeling, and building supply chain industries. In 2010, less than 10% of NAHB's total membership had more than \$15 million in gross receipts with 96% of NAHB's builder members falling below that threshold. NAHB is a true representative of small business interests and I appreciate the opportunity to provide input on the impact of this legislation on the thousands of small businesses in our industry and the millions of consumers they serve.

On the heels of the worst economic downturn since the Great Depression, the housing industry is still reeling with staggering unemployment of 18% in April 2011, weak recovery, and a total loss of 1.4 million jobs in the industry since peak employment. Dropping from a height of two million new homes constructed in 2006, new home sales were approximately 370,000 in 2009. The decline in housing was significantly greater and more profound than those experienced by a number of other industry sectors. Also during this time of decline, the housing industry has had to face a remarkable increase the number of regulatory actions and implementation of new requirements for construction that have the potential to further forestall a housing recovery once the demand for new housing returns.

Despite the downturn and sluggish recovery, the housing industry has made outstanding strides by initiating, encouraging, and promoting energy-efficient, green, and sustainable design and construction of new homes and buildings throughout the nation. Data from the Department of Energy (DOE) shows dramatic declines in the amount of energy consumed by new homes in the last few decades and it is a testament to new home builders' commitment to the goals of efficiency and to saving money for consumers.

With substantial amounts of energy lost in the nearly 130 million existing homes in the current stock, it is incredibly important to develop an effective national energy policy that is not punitive to consumers who benefit from the most-efficient new homes. Rather, the policy must promote an

effective retrofit plan for older, less-efficient housing that allows builders and remodelers to apply the benefits of energy efficiency for all housing.

I. Housing Industry Background

The entire housing industry was hit hard by the economic downturn. Sales of both new and existing homes fell sharply, followed by a precipitous decline in home values, increased foreclosures, and an inability for the market to absorb the influx of inventory that flooded the market following the collapse. The market for new homes has lagged far behind far longer than most expected. In order to understand the impact of these market dynamics on energy policy, it is incredibly important to consider the substantial absence of newer, more-energy efficient homes that were supposed to exist, but simply do not. This absence is often not factored into the majority of studies, research, and estimations on “building” energy consumption, often used to justify specific policy approaches. This is a significantly important qualifier because many policy proposals that espouse a set number of energy savings are often subject to and dependent upon the existence of one million (or more) new homes per year --- a number which is, unfortunately, not a reality in the current housing market – see Figures 1a and 1b.

Figure 1a. New Home Starts – 1959-2011 (Millions of Units, per year)



Source: U.S. Census Bureau, National Association of Home Builders

Figure 1b. New Home Sales – 1963-2011 (Millions of Units, per year)



Source: U.S. Census Bureau, National Association of Home Builders, National Association of Realtors

The early months of 2011 have also not provided any positive news for housing. Housing construction has reflected poor sales performance as total building permits in 2011 have been the lowest on record since 1960. Single family housing starts are currently at the lowest ever recorded despite low mortgage rates and generally high affordability indices. An additional constraint in the current housing market that further depresses new home construction is the lack of reliable and adequate credit. Credit is the life blood of the housing sector and many NAHB members are experiencing serious problems trying to access Acquisition, Construction and Development loans to build new homes. The loss of these new homes that should have been built to replace older stock, coupled with the ongoing uncertainty about a housing recovery, means that fewer new and more energy-efficient homes will be available for homeowners that may then be relegated to staying in older, less-efficient housing longer than expected.

II. Commercial Buildings

As an umbrella trade association, NAHB represents a variety of members that not only construct single family and multifamily homes, but also commercial buildings. NAHB also represents building owners and managers, remodelers, realtors, and a host of professionals affiliated with the housing and commercial construction industry, including many building supply companies and trade associations. Thereby, NAHB is similarly concerned, as are other commercial real estate organizations, about the impacts of additional energy requirements on new commercial construction. Because commercial construction varies greatly in operational use and composition – i.e., warehouses, multifamily buildings, mixed-use buildings, etc. – the energy profiles of commercial buildings tend to vary more widely, as do costs for installing (or retrofitting) energy efficiency features in such buildings. Financing options for commercial buildings are also much different than individual homeowners seeking a residential mortgage, and in many cases, lenders are reluctant to provide capital without a demonstrated return on investment (ROI) that fits a specific economic timeframe (e.g., 10 years). These financing restrictions sometimes make it very difficult to effectively accommodate upfront costs, specifically when some features – including aggressive efficiency requirements – do not have a ROI that falls within a lender’s specified range.

III. Energy Performance of New Homes and Existing Buildings

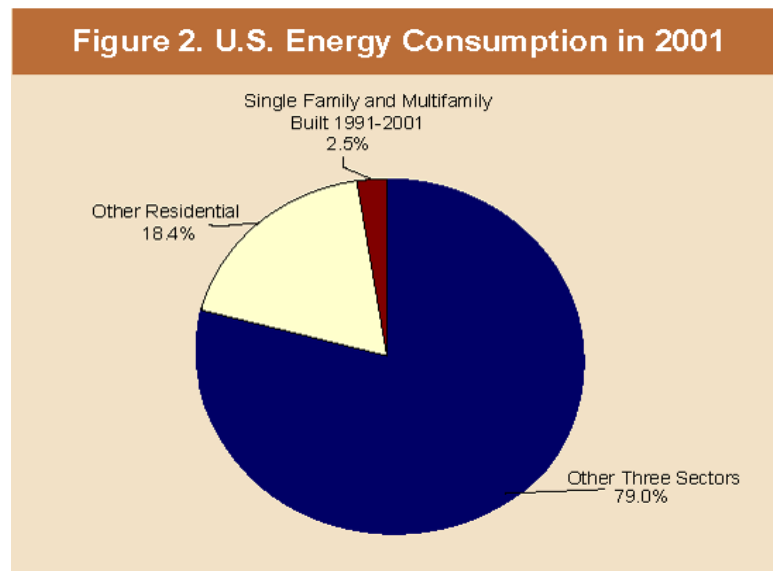
Over the last two decades, NAHB has led the way in developing, promoting, and encouraging the growth of residential green – and energy-efficient – construction. Since the early 1990s, NAHB members have been pioneers in sustainability, long before the trendy moniker “green” became mainstream. In 2009, NAHB, along with many stakeholders, commended the approval of the ICC-700 National Green Building Standard (“the Standard”), the first and only residential green construction standard approved by the American National Standards Institute (ANSI) – www.nahbgreen.org. Setting a high bar for single family and multifamily home construction, remodeling, and land development, the Standard is an affordable, rigorous, and legally-defensible benchmark for residential green throughout the nation. Unlike privately-developed green rating systems, the Standard carries the approval of ANSI which makes it compliant with relevant federal laws – National Technology Transfer Act (P.L. 104-113) – and directives that instruct federal agencies to utilize public and consensus-based industry standards in lieu of privately-developed or government-crafted criteria, (see OMB Circular A-119A (revised, February 1998)).

With the growth of green building, the introduction of the Standard, and substantial increases in energy efficiency requirements and rigorous energy codes, energy performance in new homes

has skyrocketed delivering tremendous savings. According to the Energy Information Administration (EIA), there were 76.6 million occupied housing units in the United States in 1978, using a total of 6.96 quads for space heating. Although the number of homes increased 45% to 111.1 million by 2005, the homes used significantly less energy for heating — just 4.30 quads. The EIA attributes the decline largely to improved energy efficiency of heating equipment, better window design, and insulation to more effectively seal homes.¹

To be sure, significant improvements in appliance efficiency have also helped reduce energy loss, although some of the gains in envelope improvements and appliance efficiency have been offset by a substantial increase in electronics usage. For example, EIA reports that in 2009, the average household had an average of 2.5 televisions with a screen size of 37-inches or larger, 76% of U.S. homes had a personal computer, 79% of homes had a DVD player, 43% of homes had a DVR, and at least one-third of all households had at least four electronic devices plugged in and charging at home.² As much energy as builders might be able to save in envelope improvements and appliance efficiencies, it is impossible for builders to control the fundamentals of consumer choice that, as EIA confirms, significantly affect the energy profile of a home, even one constructed to the strictest standards.

Nonetheless, new home builders have done a lot within the structure of a home to improve energy performance. The introduction of modern energy codes in the early 1990s has significantly improved the efficiency of new construction. In fact, the EIA reports that homes built between 1991 and 2001 consumed 2.5% of total energy in the U.S. – see Figure 2. Thus, if all the new homes built between 1991 and 2001 consumed zero energy, it would have saved only 2.5%.



Source: EIA, Residential Energy Consumption Survey (2005)

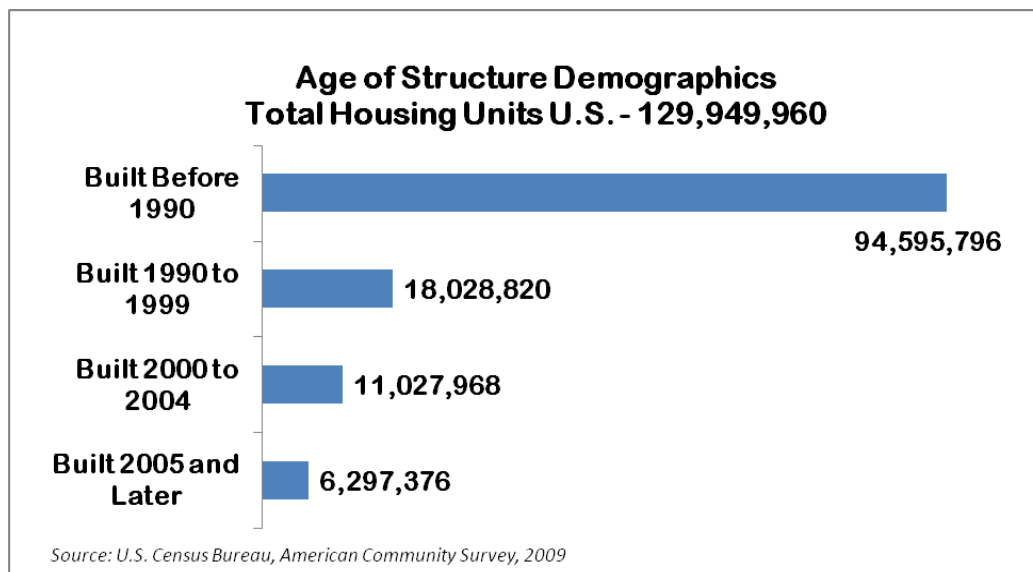
¹ EIA, Residential Energy Consumption Survey (RECS), 2009.

<http://www.eia.gov/consumption/residential/reports/electronics.cfm> (accessed 6/2/11)

² Ibid.

Older, existing homes consume virtually all of the energy in the residential sector. Homes constructed prior to the introduction of modern energy codes comprise the vast majority of the homes in the stock today, meaning the most inefficient housing is the most plentiful – see Figure 3

Figure 3. – Age of Structure Demographics



NAHB fully supports efforts to incentivize retrofitting the oldest, least-efficient stock. As a national energy policy priority, any efforts to improve the efficiency of residential and commercial buildings in the U.S. must include provisions that seek to save the energy lost in older homes and buildings. As described above, newer homes are the most energy efficient that they have ever been and with sizeable jumps in stringency from the last iteration of the national model code to the next (of more than 30%), additional requirements to further increase the efficiency will not deliver the most meaningful savings. Rather, layering on additional efficiency requirements on the most-efficient housing will only increase the cost for these “hybrid” homes.

Representing over 10,000 remodelers, NAHB has consistently championed incentives for consumers to upgrade older housing, including ongoing support for incentives under Sections 25C and 25D of the Internal Revenue Code. NAHB has lobbied alongside many efficiency and environmental organizations for extensions of a variety of tax incentives that improve building efficiency in both residential and commercial buildings. Currently, NAHB is working diligently to promote a retrofit incentive for commercial buildings that has garnered the support of more than 80 organizations – corporate entities, environmental advocates, efficiency groups, trade associations, etc. (see *attached letter dated May 5, 2011*). The most effective national energy policy is going to be that which directs federal resources at the largest part of the problem and NAHB is proud of its supportive advocacy on this critical issue.

IV. Energy Impact of Renovations on Older Housing

In order to demonstrate energy savings and cost impacts for efficiency improvements in a variety of housing, we have provided specific examples of various levels of code compliance and the resultant savings and cost paybacks for certain features. Using the REM Design Software, energy

usage calculations and resulting savings from various retrofit measures or code features can be demonstrated. Based on a 1,400 square-foot home – one story, three bedrooms, attached garage and full basement – in the Akron, Ohio (Zone 5) climate, the table in Figure 4 demonstrates the energy profiles and cost for a pre-1940 home, a pre-1940 home with a retrofit, a 2009 IECC-compliant home, and a net-zero energy home.

Figure 4. – Energy Features and Cost/Savings Calculations

	Pre-1940 Home	Pre-1940 Home w/Retrofit	2009 IECC Home	Net-Zero Energy Home
Features				
Ceiling Insulation	R-0	R-50	R-38	R-60
Above-Grade Wall Insulation	R-0	R-15	R-21	R-31
Foundation Wall Insulation	R-0	R-10	R-10	R-20
Windows (10)	U-0	U-0.29	U-0.35	U-0.29
Air Infiltration Rate	30 ACH	7 ACH	7 ACH	1.5 ACH
Heating Equipment	80% AFUE, 110 BTU	95% AFUE, 60 BTU	90% AFUE, 60 BTU	95% AFUE, 40 BTU
Cooling Equipment	None	13 SEER, 1.5 Ton	13 SEER, 1.5 Ton	14 SEER, 1.5 Ton
Hot Water Heater	40 Gal, 0.56 EF Gas	40 Gal, 0.62 EF Gas	40 Gal, 0.62 EF Gas	40 Gal, 0.62 EF Gas
Refrigerator	Pre 1986, 1,700 Kw/Yr	Energy Star, 500 Kw/Yr	Energy Star, 500 Kw/Yr	Energy Star, 500 Kw/Yr
Annual Energy Cost/Year	<i>\$2,580.00</i>	<i>\$1,085.00</i>	<i>\$860.00</i>	<i>\$0.00</i>
Upfront Costs		\$10,405.00		\$40,038.00
Annual Energy Savings		\$1,522.00		\$0.00
Payback to Consumer		6.83 Years		46.56 Years

Source: REM Design Software; Calculations and Methodology by Tony Crasi, June 2011.

The data shows that upgrading an older, less-efficient, pre-1940 home can save over \$1,500 per year in energy costs with an upfront cost of \$10,405.00. More importantly, however, is that the energy-savings payback to the consumer is only 6.83 years for this investment. In less than a decade, the family that lives in the retrofitted home could recoup their costs in energy savings. On the other hand, making a newer home – compliant with the 2009 IECC – into a net-zero energy structure would cost a little more than \$40,000. While having no energy bill is certainly a feature that most homeowners would likely enjoy, very few consumers, if any, would probably be able to finance

an additional \$40,000 upfront into their mortgage product or property taxes and insurance. Furthermore, the future homebuyer would also have to wait nearly five decades to recoup these upfront costs.

The good news is that there is ample opportunity to save substantially more energy by improving older homes, with much more meaningful energy savings paybacks to consumers. According to the American Community Survey, in 2009, there were 18,266,689 pre-1940 homes in the United States. Improving 12 million pre-1940 homes to save \$1,522 per year in energy costs would result in more than \$18 billion per year for consumers. Additionally, the REM Design software also calculates that a retrofit of this scale would similarly save 240 million tons of carbon dioxide per year.

Not only would such a retrofit program save energy for consumers and reduce carbon dioxide emissions, but it can also create jobs in our struggling industry. For example, NAHB estimates from economic data shows that the direct impacts of remodeling at the national level, which includes the number of jobs and income created, as well as the amount of government revenue generated (based on national averages to capture impacts on the aggregate economy), was 1.11 jobs and \$30,217 in taxes from every \$100,000 spent on residential remodeling in 2008.³ A national policy approach to provide incentives for retrofits to the oldest, least-efficient stock would reap tremendous energy savings, reduce greenhouse gas emissions, and create jobs in the construction industry. NAHB strongly encourages the Committee to consider a retrofit plan that is equally-accessible to all qualified contractors, encourages retrofits in all parts of the U.S., and that is consumer-focused rather than providing more money and authority to DOE to layer energy requirements on newer housing.

V. An Appropriate Role for DOE in National Model Codes

The national model codes development process is an arduous and complicated way to convene stakeholders interested in the health, life, safety, structural soundness – and more recently – energy efficiency of homes and buildings to set minimum standards for new construction. The national model codes organizations – International Code Council (ICC) and ASHRAE – coordinate and publish the final editions of codes and standards for single family and multifamily/commercial buildings, as established through a lengthy process involving several meetings of thousands of building code officials, builders, efficiency advocates, State and local governments, product suppliers, etc. At these hearings, stakeholders vote on proposals to incorporate changes to existing codes and once published, State and local governments are encouraged to adopt the new codes, or adopt a modified-code that can address State-specific or geographic needs without impacting the stringency of the newly-minted national models.

Energy codes are developed on three-year cycles (next edition is 2012 International Energy Conservation Code (IECC) for residential, 2013 for ASHRAE) and NAHB, as well as the DOE and many others, have participated in the development of the national model energy codes for several years. By proposing modifications that improve efficiency, yet remain cost-effective, NAHB has supported a number of code changes to vastly increase the efficiency of newer codes. For example,

³ Housing Economics.com, <http://www.nahb.org/generic.aspx?sectionID=734&genericContentID=103543&channelID=311>, accessed June 7, 2011

many stakeholders, including DOE, attended the last cycle of code hearings for the 2012 IECC (held during Fall 2009) with proposals supporting a 30% increase in stringency over the 2006 edition. NAHB's 30% proposal was voted down, but the DOE's 30% proposal was approved by the ICC. Because many things can comprise a 30% increase in stringency, NAHB informally sought information from DOE on how it calculated its 30% jump, but our request was ignored.

To be sure, the DOE carries a heavy weight in the codes development process and at the code hearings and many are extremely deferential to the preferences of DOE. Nonetheless, NAHB feels strongly that DOE should not be allowed to withhold information from a regulated industry group that is attempting to figure out how to comply with a DOE-developed code change. Thus, in April 2010, NAHB submitted a formal Freedom of Information Act (FOIA) request to DOE to seek the calculation methodology used to determine the DOE's 30% increase in energy savings for the 2012 IECC. The initial response from DOE came from Deputy Assistant Secretary Kathleen Hogan in June 2010 and stated that "no responsive documents were found" – *see attached letter dated June 7, 2010*. Because DOE had already given public presentations indicating that the "new code" was "30.6%" above the 2006 edition, NAHB understood that DOE definitely had the information available on its calculations, so we appealed the FOIA response.

Thankfully, some Members of this Committee helped facilitate a more constructive response from DOE. After more than a year of back-and-forth with DOE and one of its national labs, NAHB received a communication on June 2, 2011, indicating that DOE can provide some of the information on its calculations, following a review by its FOIA Officer. A detailed timeline (Appendix A) is attached to this statement demonstrating NAHB's efforts to obtain this information and DOE's responses to our requests for the mathematical and technical calculations behind its 30% code increase. NAHB has tried unsuccessfully for over a year to simply discover how the federal agency in charge of calculating and determining code efficiencies was doing the job it is already assigned to do under existing law.

In light of this experience, NAHB is extremely concerned that this Committee could bestow additional authority on DOE to become even more engaged in national model codes, to establish code targets that are based on even greater stringencies, loftier goals, and even more complicated calculations and analyses. The inability to obtain technical information from DOE in a timely manner, or even at all, is of great concern to NAHB. Thus, it is critical that the Committee examines the most appropriate role for DOE in the codes process before granting additional authority, and more importantly, providing more federal resources for DOE.

VI. S. 1000 – The Energy Savings and Industrial Competitiveness Act (ESICA)

NAHB is pleased to have contributed as a stakeholder in the process of developing the ESICA legislation and looks forward to continuing to provide additional input as it is considered by the Committee. The ambitious legislation seeks to provide incentives for retrofitting older homes for consumers in rural areas by addressing energy inefficiencies in existing housing. Although NAHB still has some concerns about the practical implementation of provisions that set goals for new residential and commercial buildings to be "net zero energy" by 2030, NAHB is encouraged that additional work to further refine and streamline the path to higher efficiencies, while carefully considering the cost impacts on new building, will be examined.

Section 101 – Greater Energy Efficiency in Building Codes

Although NAHB disagrees with the underlying premise for including a provision to substantially increase energy code stringency in new construction, for the many reasons identified above, NAHB does support important additions in this section that seek to shine a greater light on the activities of DOE as it relates to the development of national model codes and standards. Ultimately, NAHB would prefer to rework this section to clarify the role of DOE, including more clearly defining its intended job as a technical advisor. As proven, the model codes and standards development process continues to deliver substantial increases in efficiency stringency, a trend that is not expected to stop. NAHB and others in the real estate community deserve access to the technical expertise and resources of DOE to help achieve these demanding goals for new buildings. Thus, NAHB strongly encourages the Committee to consider the appropriate role for DOE and how it can more effectively serve the groups that will ultimately have to finance, construct, own, lease, and manage the most energy-efficient buildings ever built.

NAHB fully supports the inclusion of provisions in this section that seek to address the existing lack of consideration of any economic impact of code requirements, the lack of transparency regarding technical requests for information from DOE, and the removal of arbitrary percentage-based targets that have consistently existed in previous versions of legislation on this topic. NAHB applauds efforts to allow DOE to consider the energy efficiency of other features in a home when making determinations on code targets – e.g., lighting, appliances, renewable energy systems, etc., as these traditionally rest outside the jurisdiction of the codes and have been unable to be effectively evaluated when determining overall efficiency gains. NAHB also supports efforts to allow public comment and compliance with the Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 601; P.L. 104-121) when establishing targets, as this will provide greater opportunities to evaluate and expose real cost impacts on small businesses and offer an additional layer of transparency in any instance where DOE is engaged

Areas of concern that NAHB hopes to continue to work on include establishing the “net zero energy” goal for all new homes and buildings by 2030, a basis determination of the 2009 IECC, and the inclusion of “life-cycle cost effective” indices that are current parameters in the legislation for creating code targets. In both residential and commercial, the practical reality of having a “net zero energy” building is financially unrealistic. In a home, it may likely be easier to construct a “net zero energy” structure, albeit a very expensive one, but “net zero energy” commercial buildings are essentially impossible to finance and build, particularly within the confines of the current financing and investment structure facing commercial real estate.

Indeed, NAHB understands that “net zero energy” building is an aspirational goal and that the DOE may have the flexibility to adjust it along the way, but we remained concerned that the target date would be codified legislatively. As NAHB has come to learn first-hand, specified targets and dates in federal legislation can often be espoused as tacit mandates for the many outside Washington that must deal with the implementation of codes and standards at the State and local levels. NAHB is pleased to continue to work with the Committee to find an appropriate path forward to support voluntary advanced codes that more adequately consider the unique dynamics of financing residential and commercial construction projects during this fragile period of recovery.

Section 201 – Rural Energy Savings Program

NAHB supports Section 201 to provide low interest loans to consumers to install energy efficient technologies that will save energy for American families, create jobs, and reap environmental rewards. NAHB supports provisions to establish demonstration programs that help implement measurement and verification approaches to energy audits and investments in energy performance improvements with measurable results. NAHB believes that tracking energy savings improvements in older, less-efficient homes is important to demonstrate voluntary efforts already underway to reduce overall energy use in the building sector. Without meaningful incentives to retrofit the millions of less-efficient existing homes, true energy savings in the residential sector will never materialize.

Section 202 – Building Energy Retrofit Loan Credit Support Program

NAHB supports the goals of Section 202, but hopes for additional refinements to make such a loan guarantee program meaningful for real estate. As with any loan guarantee authorization, section 202 must be crafted to allow for fiscally austere measures that limit DOE's exposure to financial risks in the event of a borrower's default on a government-backed retrofit obligation. In this regard, "guidelines" required by section 202 to implement the new loan guarantee program should include assessments of a borrower's creditworthiness, the building's loan to value ratio, and the building's history and expectations in generating rental and other income, among other factors. Additionally, the guidelines could carve-out retrofit "performance risks" not to be borne by DOE. A prerequisite to project qualification should be guaranteed energy savings arising from the retrofit, such as through energy service performance contracts and other mechanisms. Third-party contractors responsible for the retrofit like DOE-approved energy services companies should bear risks that installed energy efficiency measures will perform as designed, not DOE. In this way, the transaction can be structured so as to amortize retrofit financing through energy savings, and energy performance will be measured and verified so that the project is a safer bet and DOE's guarantee is limited to covering the "default risk" of the borrower.

While managing DOE's risks, refinements are also needed to make the retrofit loan guarantee program meaningful for and usable by real estate owners, managers and financiers. Currently, there are provisions in existing law requiring debt obligations backed by federal guarantees not to be subordinate to other financing.⁴ When these provisions were adopted in 2005 with nuclear plants, wind farms and large-scale solar projects in mind, Congress did not consider the effect on the proper functioning of traditional commercial and residential mortgages (such as the sale of mortgages on secondary markets).

A fundamental tenet of real estate finance is that, in the event of a property owner's default on the mortgage and/or foreclosure, the lender (or "mortgagee") will receive payments outstanding on the loan *before* sums are paid to any other secondary security interest in the property. In other words, the first mortgagee has a superior lien taking precedence over secondary security interests in the collateral. This principle of "mortgage superiority" is an industry standard written into deeds of trust and other mortgage documents, including Fannie Mae's uniform security instruments.

⁴ See 22 U.S.C. 16512(d)(3) ("The obligation shall be subject to the condition that the obligation is not subordinate to other financing"); *id.* § 16512(g)(2)(B) ("The rights of the [Energy] Secretary, with respect to any property acquired pursuant to a guarantee or related agreements, shall be superior to the rights of any other person with respect to the property").

Borrowers would likely be in breach of contract if they allowed a secondary lender (such as one extending a loan to finance the retrofit of a commercial building) to occupy a more favorable lien position on the asset, to the detriment of the bank providing a mortgage loan in the first instance.

As NAHB understands, there is some confusion over the application of requirements in the existing law if applied to a loan guarantee for building retrofits, potentially putting DOE's interests in conflict with the rights of first lenders in mortgaged properties. Building owners considering retrofits and contemplating loan guarantee financing for efficiency upgrade projects will find themselves in untenable positions. Such borrowers could not simultaneously respect their contractual obligations to allow mortgagees to maintain a higher interest in the collateral, while also ensuring that a government-backed retrofit loan is "not subordinate to other financing" or that the DOE has superior interests compared to the "rights of any other person" in the property.⁵

Thus, it is critical to get this lien priority issue right, so that real estate ownership and lending communities can avail themselves to any new retrofit loan guarantee products in a market transformative manner. Accordingly, NAHB supports changes to refine this provision to amend the Energy Policy Act by adding a new §1706 which, among other things, would direct DOE to develop guidelines to implement the credit support program for building retrofits. These guidelines must include "any lien priority requirements that the Secretary determines to be necessary." (§1706(c)(2)(E), p. 156 lines 17-18.) NAHB understands this to mean that DOE may, through its guidelines, establish new principles to address the first mortgagee lien issue discussed above and provide that the federal obligation may be subordinate to prior mortgages on an eligible building. NAHB suggests that the statutory language needs to be more direct and Congress should direct DOE to consider how the superior rights of first-in-time mortgagees can be maintained while minimizing the federal government's exposure to default on the underlying obligation to underwrite the retrofit.

Similarly, NAHB supports refinements offered and supported by groups like The Real Estate Roundtable to more clearly define eligible projects and buildings and defining minimum energy savings when establishing the loan guarantee program. The most effective way to develop a retrofit policy and approach is to allow for the most flexibility and the most participation. Access to the program is critical, as is not limiting projects by scope or benchmarking requirements. Because commercial retrofit programs are often extremely expensive, yet can be the most transformative in terms of energy savings, it is important to make the parameters of the program open-ended and to include as much input from the real estate community as possible during development of guidelines, criteria documents, and other administrative processes.

Conclusion

Despite facing the worst economic downturn since the Great Depression, the housing industry is ready to work to improve the energy efficiency and performance of new and existing homes and buildings throughout the U.S. New homes have dramatically changed the energy performance of "buildings" with substantial efficiency gains over the last few decades. The growth of green building has also helped further the strides in improving new home performance and NAHB is pleased to have contributed to the initiation of the first and only ANSI-approved residential green

⁵ 22 U.S.C. §§ 16512(d)(3), (g)(2)(B).

construction standard. NAHB continues to be a leader in promoting energy-efficiency in all facets of the industry – single family, multifamily, light commercial, and remodeling.

Even with low mortgage rates and relatively high housing affordability, the housing market has not seen the turn around that many expected. With access to credit a major concern, coupled with foreclosure, appraisal and inventory issues, builders are facing substantial challenges building new homes in today's market, leaving fewer, more-efficient homes available for consumers. NAHB is concerned with the changing dynamics of energy requirements for new housing because it has the potential to make the newest, highest-performing homes unaffordable for the average family. Rather, NAHB encourages a national policy that directs limited federal resources at the biggest source of energy loss in the real estate sector: older homes and buildings.

NAHB is pleased to have contributed to the legislative process up to this point, and we hope to continue to do so as the Committee moves forward and considers the legislation. Our industry has faced substantial changes over the last few years and will have to deal with an entirely new regulatory and housing finance landscape in the next few. NAHB supports energy efficiency and wants to encourage support for programs that help put our members back to work retrofitting older, less-efficient homes and buildings. With over 160,000 members, NAHB looks forward to being a key partner in developing an effective national energy policy.

Appendix A - Timeline of NAHB's FOIA Request and the Related 2012 IECC Development Schedule⁶

EVENT	DATE
IECC Code Committee Hearings: Government and industry stakeholders (including DOE and NAHB) debate proposals to amend the 2012 International Energy Conservation Code (IECC). DOE claims that its proposal will improve energy savings by 30% above the 2006 IECC.	Oct. 24 – Nov. 11, 2009
NAHB Files a FOIA Request: NAHB files a FOIA request to DOE's Office of Energy Efficiency and Renewable Energy (EERE) and the Pacific Northwest National Laboratory (PNNL) for the methodology for calculating energy savings from new IECC editions, including: The methodology for evaluating energy savings from the 2006, 2009, and 2012 IECC editions (including all underlying assumptions and computer simulation model files); The methodology and assumptions to evaluate energy savings from 15 specific variables; and The full equation to calculate energy savings from new IECC editions.	Apr. 12, 2010
DOE/PNNL Estimate Energy Savings from their 2012 IECC Proposal: DOE/PNNL release a report claiming that their proposed 2012 IECC changes will improve energy savings by 30.6% above the 2006 IECC. The May 2010 Report excludes the full energy savings analysis, an equation, and the underlying assumptions. ⁷	May 2010
DOE Denies NAHB's FOIA Request: DOE claims it searched all its files and "located no responsive documents."	June 7, 2010
DOE Backtracks and Transfers Request to PNNL: DOE later admits that it searched only EERE's files (not all DOE files) and "did not locate any records that are responsive to the request." DOE plans to transfer NAHB's request to DOE's Oak Ridge, TN Office (ORO) to oversee a search of PNNL's records.	June 25, 2010
DOE Assigns New FOIA Number to NAHB's Request: DOE officially transfers NAHB's FOIA request to ORO and assigns a new tracking number.	June 28, 2010
Deadline for Public Comment on IECC Proposals: The deadline to submit public comments on the proposed changes to the 2012 IECC passes without any response to NAHB's FOIA request.	July 1, 2010
NAHB Appeals EERE's Records Search: NAHB appeals EERE's records search based on publicly available information (e.g., the May 2010 Report) suggesting that EERE has records responsive to NAHB's request.	July 14, 2010
OHA Denies NAHB's Appeal: DOE's Office of Hearings and Appeals (OHA) denies NAHB's appeal of EERE's records search, because PNNL – not EERE – has responsive records.	Aug. 9, 2010
PNNL Estimates Response Fees and Asks for Narrowed Request: PNNL estimates that it will need up to 50 hours and about \$3000 to compile the "hundreds and hundreds" of files (including computer model input and output files). PNNL asks NAHB to narrow its request based on a list of available documents.	Aug. 18, 2010
NAHB Narrows Request: Based on the document list, NAHB limits its request to the 2012 IECC edition calculations (including all computer model files), information regarding only 5 underlying assumptions, and the full energy savings equation.	Aug. 31, 2010

⁶ The entries related to the 2012 IECC development schedule appear in shaded boxes.

⁷ See Z.T. Taylor, R.G. Lucas, *An Estimate of Residential Energy Savings From IECC Change Proposals Recommended for Approval at the ICC's Fall, 2009, Initial Action Hearings* (May 2010), available at <http://www.energycodes.gov/IECC2012/documents/residential-savings-estimate.iecc-2012-proposals.6-may-2010.pdf> (May 2010 Report).

<u>EVENT</u>	<u>DATE</u>
PNNL Revises Estimate and NAHB Agrees to Pay Fees: PNNL estimates up to 32 hours and \$2,196.11 to compile a response to NAHB's request.	Sept. 9, 2010
DOE/PNNL Supply Only Two Spreadsheets: DOE/PNNL produce only two Excel spreadsheets in response to NAHB's FOIA request and claim that there are no other "responsive records."	Sept. 15, 2010
Industry Coalition Requests the Methodology: An industry coalition ⁸ requests the methodology from Secretary Steven Chu and urges DOE to follow an open, transparent, and collaborative code development process.	Sept. 20, 2010
NAHB Requests Confirmation that the Two Spreadsheets Constitute DOE's Complete Response. DOE never responds.	Sept. 23, 27 & 28, 2010
NAHB Asks Congress to Request the Information: NAHB asks members of energy-related congressional committees to request the energy savings calculation methodology from DOE.	Oct. 1, 2010
NAHB Appeals PNNL's Records Search: NAHB's appeal highlights emails from PNNL indicating that there are "hundreds and hundreds" of responsive documents, including computer simulation model files.	Oct. 13, 2010
DOE Responds to the Industry Coalition Letter: EERE claims that the industry coalition's request parrots NAHB's FOIA request and that DOE provided all responsive information.	Oct. 19, 2010
ICC Hearings Finalize the 2012 IECC Edition: The International Code Council (ICC) holds hearings to finalize the 2012 IECC and adopts DOE's IECC proposals.	Oct. 24 – Nov. 11, 2010
OHA Remands NAHB's FOIA Request to ORO/PNNL: OHA discovers that PNNL erased computer simulation model files to save storage space, but failed to produce other responsive records or to state that the records destruction complied with government record retention requirements. However, OHA learns that PNNL has an "intermediate template file" that bridges computer simulation model files between computer programs. OHA orders PNNL to extract non-proprietary information from the intermediate template file and produce information relevant to NAHB's FOIA request.	Nov. 19, 2010
ORO/PNNL Processing Remanded Request: ORO received a few additional Excel spreadsheets from PNNL, but must evaluate PNNL's claims that the documents contain some proprietary information. In February, May, and June, ORO indicated that they are evaluating the information and plan to send non-exempt materials to NAHB. As of June 6, 2011, NAHB has not received a response to the November 19, 2010 remand of NAHB's FOIA request.	Feb. 10, May 11, & June 2, 2011

⁸ The industry coalition was composed of APA-The Engineered Wood Association, the Building Owners and Managers Association International, NAHB, the Vinyl Siding Institute, and the Window & Door Manufacturers Association.