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**American Forest & Paper Association (AF&PA)  
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**Statement Submitted for the Record**

**U.S. Senate Committee on Energy and Natural Resources  
Recommendations for Reducing Energy Consumption in Buildings**

**February 26, 2009**

The American Forest & Paper Association (AF&PA) appreciates this opportunity to present the forest products industry's views regarding recommendations for reducing energy consumption in buildings. AF&PA is the national trade association of the forest products industry, representing manufacturers of wood products, pulp, paper, and packaging and forest landowners. Our companies make products essential for everyday life from renewable and recyclable resources that sustain the environment. The forest products industry accounts for approximately 6 percent of the total U.S. manufacturing GDP, putting it on par with the automotive and plastics industries. The industry produces \$200 billion in products annually and employs more than 1 million people earning \$54 billion in annual payroll. The industry is among the top 10 manufacturing sector employers in 48 states.

### *Reducing Energy Consumption in Buildings*

AF&PA and its members are committed to reducing the environmental impact of buildings by encouraging energy-efficient, environmentally responsible choices during the design and construction process. Use of green building ratings systems is one of the most effective means to achieve both energy efficiency, and overall environmental responsibility. Below we summarize the positive attributes of wood building materials and green building rating systems, as well as a few concerns about the inadequacies of some systems.

### *Wood Products and "Green" Buildings*

Wood is among the most energy-efficient and environmentally friendly of all building materials. It is less energy and carbon intensive to produce than competing materials like steel and concrete. Among other positive environmental characteristics, wood stores huge amounts of carbon, contributing to the reduction of CO<sub>2</sub> in the atmosphere. Wood products are a vital component of sound architectural design and construction, while providing inherent energy-saving performance. Wood buildings are readily adapted to reuse or can be deconstructed and individual products reused in new construction. Lastly, wood is a renewable resource, a characteristic of unparalleled environmental value.

Green building rating systems that do not fully recognize the environmental benefits provided by the use of wood products are flawed.

We believe that rating systems should include all credible sustainable forestry programs in the U.S. Equal credit should be given to all programs that meet a commonly accepted set of objective criteria, including globally-recognized sustainable forestry programs, such as the Sustainable Forestry Initiative<sup>®</sup> (SFI) program or the American Tree Farm System<sup>®</sup>. They should also include life cycle assessment (LCA). It is critical that rating systems be grounded in objective, scientific criteria based on life cycle impacts. LCA provides objective criteria so that a rating system or standard yields consistent results through appropriate thresholds and baselines, and allows for the comparison of buildings in different locations on equal terms.

It is also important that green building rating systems be developed in a consensus process that meets the spirit of the American National Standards Institute (ANSI) Essential Requirements<sup>1</sup> or OMB Circular A119. Development of a standard under a recognized consensus process provides transparency and ensures the opportunity for meaningful participation by all groups that will be affected. A true consensus process also has procedures to ensure balance, consideration of dissenting views, and appeals procedures. ANSI is the coordinator of the U.S. standards process and provides strict objective requirements for accreditation of those processes. A credible rating system must be developed using a process that embodies the elements of consensus as defined by ANSI.

Government entities should adopt green building policies that recognize the energy-saving attributes of wood, are inclusive of forest certification programs, based on sound science, including LCA, and have been developed in a consensus process. AF&PA and its members will continue to work with all interested parties to create and promote green building rating systems that meet the above criteria.

### *Green Buildings and Climate Change*

AF&PA recognizes that the environmental impact of buildings is significant. Construction and operation of residential and commercial buildings account for nearly 40 percent of all greenhouse gas (GHG) emissions in the U.S. In particular, the more than 500,000 federally-owned and leased buildings often consume more energy than non-governmental buildings and require billions in energy costs. It is critical that efforts to address climate change through green building construction recognize the positive environmental benefits of wood construction materials.

It has been shown that the use of wood building materials can help mitigate the climate change impact of building construction. The Consortium for Research on Renewable Industrial Materials (CORRIM), a non-profit academic research consortium, undertook a

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<sup>1</sup> *ANSI Essential Requirements: Due process requirements for American National Standards* (<http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2008%20ANSI%20Essential%20Requirements/2008%20ANSI%20Essential%20Requirements%20031108.pdf>)

study evaluating the energy and environmental impact of leading building materials. The study concluded that the use of wood-framing in buildings resulted in the generation of 26 percent fewer CO<sub>2</sub> emissions than for comparable steel-frame buildings, and 31 percent fewer than for concrete-frame buildings. Also, the study found that manufacturing wood framing used at least 16 percent less energy than producing steel or concrete frames, and had other environmental benefits, as well.

In addition, the ability of wood products to store carbon is recognized internationally by climate scientists and policymakers, including the most recent guidelines from the Intergovernmental Panel on Climate Change. Nearly one-third of carbon sequestered in forests becomes sequestered in the products made from them. Wood building materials can store carbon for their useful life keeping it out of the atmosphere for decades or even centuries. The EPA estimates that the amount of carbon in wood and paper products is equivalent to removing over 100 million tons of carbon dioxide from the atmosphere every year. This is equivalent to eliminating the carbon dioxide emissions from 18 million passenger cars – 13 percent of all passenger cars on the road in the U.S.

### *Green Building Rating System Concerns*

The U.S. forest products industry has been working for several years to assure that green building rating systems provide appropriate recognition for the positive environmental attributes of wood building materials, and follow recognized standard development procedures that assure fair treatment for all stakeholders. Unfortunately, the U.S. Green Building Council (USGBC) has failed so far to incorporate this recognition into its Leadership in Energy and Environmental Design (LEED) green building rating system.

One of our primary concerns with the LEED program is its failure to recognize all credible, sustainable forestry certification programs in its certified wood credit. LEED only provides credit to builders using forest products certified by the Forest Stewardship Council (FSC). No credit is awarded for wood products produced by companies independently third-party certified to the SFI<sup>®</sup> program standard or the American Tree Farm System<sup>®</sup> (ATFS) – the two largest sustainable forest management systems in the U.S., and both accredited by PEFC, a third-party international group. These two programs account for over 100 million acres of forestland, yet are unable to qualify for points under the LEED rating system. This point structure forces builders to either eliminate wood products from their designs, or if they nonetheless use wood, must largely import their wood from overseas to receive LEED credits for certified forest products.

Also, the LEED rating system does not recognize the positive attributes of renewable wood products. For instance, LEED provides credit for using “rapidly renewable materials,” which LEED arbitrarily defines as products originating from plants grown and harvested in a 10-year cycle. U.S.-based construction lumber does not qualify for this credit since domestic timber is grown and harvested on a longer rotation. The credit thus benefits exotic crops such as bamboo from overseas or wheatgrass. This suggests that under LEED it would be “greener” to deforest an area of native trees that are being sustainably managed and replace it with a plantation crop of an invasive species like bamboo or wheatgrass. This is an outcome that would have negative consequences for the environment.

Some building codes and a number of green building rating systems rely on an American Society of Heating, Refrigeration, and Air Conditioning Engineers standard, ASHRAE 90.1, to determine minimum building energy performance, while others recognize other state-of-the-art energy codes. Since 1999, ASHRAE 90.1 has unfairly required greater energy performance for wood wall construction than for walls constructed of other materials. Wood walls quickly become economically uncompetitive due to these more restrictive provisions. Energy codes will only be effective when equal performance is demanded from all building materials. Further, LEED relies entirely on ASHRAE 90.1 to determine energy efficiency and, in the process, not only discriminates against wood products, but gives preferential treatment to steel and concrete, which are permitted to underperform wood walls. Providing users with options in choosing rating systems will also help to mitigate these energy performance penalties imposed by LEED. Further, the Department of Energy should continue to review and revise the energy performance requirements in the codes and standards it references for this purpose.

Additionally, the federal government must turn its focus to the existing building stock. In the case of residential construction, there are more than 70-million one- and two-family dwellings across the country. New starts represent 0.7 percent of all existing one and two-family dwellings. It is important that the federal government focus on the energy performance of existing buildings to maximize impact on energy consumption.

Finally, every existing version of LEED was not developed in a consensus process open to all interested parties. Our industry specifically asked to participate and was rebuffed. The process USGBC used to create and maintain these LEED versions did not meet generally accepted criteria for development of consensus standards. While USGBC has since obtained accreditation from ANSI as a green building Standards Developing Organization, USGBC has not developed any existing edition of LEED through their ANSI-accredited process.

#### *Legislation Should Recognize Multiple Rating Systems*

As the Committee is aware, several new green building rating systems have been developed and entered the marketplace in the past few years. Growing demand for building “green” is attracting competition in the green building marketplace. We believe this competition is healthy and will result in a rapid increase in the number of green buildings in the U.S., as well as improvements in the rating systems themselves.

As Congress continues to explore this issue and contemplates policy options, we recommend that Congress avoid policies that may stifle competitive forces that are driving the green building rating system movement. We encourage Congress to explore and evaluate the full range of systems now available in the marketplace beyond just LEED. Legislation should not pick winners and losers in the constantly-evolving green building marketplace, particularly as these rating systems are private-sector products. Solely including references to the LEED rating system prevents other credible systems, such as the Green Globes™ system for commercial construction and the National Association of Home Builders’ National Green Building Standard for residential construction, from contributing to legislative goals.

## *Conclusion*

AF&PA appreciates this opportunity to present its views to the Committee regarding the design and construction of these green buildings. The forest products industry supports the construction of environmentally-friendly and energy-efficient green buildings. We believe that wood products can contribute greatly towards building green if treated appropriately in rating systems and energy codes. It is, therefore, important that legislation promoting green buildings not specify one rating system, but rather make all credible systems eligible to participate in its provisions. AF&PA and our member companies look forward to working with the Committee and Congress on this important set of issues.

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