



National Institute of
BUILDING SCIENCES

The High-Performance Building Council
of the
National Institute of Building Sciences
Testimony of
William J. Coad, P.E., FASHRAE
Provided to the
Subcommittee on Energy and Environment of the
Committee on Science and Technology
United States House of Representatives
Washington, DC
April 28, 2009

Mr. Chairman and Members of the Committee,

My name is William J. Coad. I am testifying before this Committee as a member of the National Institute of Building Sciences Board of Directors. I am a volunteer member of the Board. I am also President of Coad Engineering Enterprises and a consulting principal and past Chairman/CEO of The McClure Corporation.

I am a registered professional engineer in 38 states and a past President of the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE). For 17 years I was an Affiliate Professor at Washington University in St. Louis, teaching graduate courses in Mechanical Engineering and served as a thesis advisor in building environmental systems design.

I am here today to testify on expanding the effort you identified in Section 914 of the Energy Policy Act of 2005.

The National Institute of Building Sciences is a private, non-profit organization established by Congress as a single authoritative national source to make findings and advise both the public and private sectors on the use of building science and technology to achieve national goals and benefits. It is truly a public/private sector partnership, governed by a Board of Directors that represents all sectors of the building community, including appointees by the President of the United States.

I would like to introduce Henry L. Green, Hon. AIA, President of the Institute. Before coming to the Institute in 2008, Mr. Green was Director of the Bureau of Construction Codes for the State of Michigan. He is also a past President of the International Code Council, developer of the International Building Code.

The Energy Policy Act of 2005 (EPACT) and the Energy Independence and Security Act of 2007 (EISA) seek to reduce building-related energy consumption and dependence on foreign energy sources.

Title IX, Subtitle A, Section 914 of EPACT specifically directed the National Institute of Building Sciences to explore the potential for accelerating development of consensusbased voluntary standards to set requirements for less resource-intensive, more energy-efficient, high-performance buildings.

As a result of this Congressional directive, the Institute formed the High-Performance Building Council in 2007. In 2008, the Council issued a report entitled, "Assessment to the U.S. Congress and U.S. Department of Energy on High-Performance Buildings." My testimony today is based on the conclusions and recommendations of this report.

The Council currently has over 75 associations and Federal agencies as members. They represent all the major sectors of the building community and including

- The American Institute of Architects,
- ASHRAE,
- ASTM International,
- The Associated General Contractors of America and
- The International Code Council, as well as many others.

Section 914 included no specific funding authorization, however, based on a small amount of funding from the Department of Energy the Council performed an initial assessment of the current knowledge, with the help of standards development organizations, professional societies, governmental agencies, and major trade associations. Representatives examined hundreds of existing standards to judge their relevance to high-performance buildings.

The Council was charged in Section 914 with determining what was needed to accelerate the development of voluntary, consensus-based standards for highperformance buildings. As our report demonstrates, many of the existing standards, guidelines, and recommended practices are developed independently, addressing only one aspect of the building, without communicating across disciplines or parties, or looking at the building as a whole.

Implementing the High-Performance Building Council's recommendations--based on a harmonized definition of high-performance buildings--would greatly accelerate the development and use of uniform voluntary consensus-based industry standards for new construction and renovation.

As Congress considers new legislation focused on implementing high-performance buildings, the High-Performance Building Council offers its technical expertise and guidance to help reach the nation's goals.

At the time of EPACT the industry was fragmented in terms of performance requirements for high-performance buildings. That is still the case today. However we now have an organization ready to bring the industry together. The Council's vision is harmonized standards—in place and used—that result in high performing buildings. The mission of the Council is to seek industry consensus to establish and update the definition of high performance buildings and to promote the harmonization of industry standards to meet that definition and encourage the production of high performance buildings throughout the United States. The Council would develop an industry consensus model which would identify the range of metrics and benchmarks to define High-Performance. Federal Agency research would assist in providing for these metrics and benchmarks and private voluntary standard development organizations would use the model to develop their individual standards and to harmonize these together for the final realization of whole high-performance buildings.

Congress can help by implementing the recommendations made in our report. I ask your support to implement the activities envisioned and authorized by section 914 of the Energy Policy Act of 2005 through the High-Performance Building Council of the National Institute of Building Sciences.

New high-performance building standards have the potential to enable designers, developers, and owners to construct buildings that significantly exceed the minimum requirements of current codes and standards. The results could lead to highperformance buildings that use substantially less energy, and even potentially improve the health, comfort, and productivity of their occupants.

Thank you.