March 1, 2017

Dear Industry Stakeholders:

I am pleased to confirm, through this Communication on Engagement covering the period of March 2015 to March 2017 that the National Institute of Building Sciences reaffirms its support to the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labour, Environment and Anti-Corruption.

Based on our congressionally established mission to bring the public and private sector together to advance the nation’s health, safety and welfare through the built environment, the Institute is involved in numerous activities that reflect the priorities espoused by the Global Compact. We outline many of these activities here and welcome your feedback and participation in realizing their success. Additionally, we encourage you to consider joining us in supporting the Global Compact and the Ten Principles.

Sincerely yours,

Henry L. Green, Hon. AIA
President
Description of Actions and Measurement of Outcomes

The National Institute of Building Sciences (Institute) is pleased to outline the activities undertaken since originally committing to the Global Compact and the Ten Principles.

In furtherance of the Global Compact within the buildings industry, the Institute worked with the Royal Institution of Chartered Surveyors (RICS) and the Local Network to organize a consultation session to provide input for the development of Responsible Business Best Practices for the Land, Construction and Real Estate Sector.

While the Institute is supportive of all principles, given our areas of focus, our efforts have been concentrated around principles six, eight and nine and are outlined below.

*Principle 6: the elimination of discrimination in respect to employment and occupation.*

**Low Vision Design Committee**

The Institute established the Low Vision Design Committee (LVDC) in November, 2011 to focus on development of design principles and regulatory guidelines for creating safer and more accommodating environments for the growing population of people with low vision.

The LVDC released Design Guidelines for the Visual Environment in 2015 after two rounds of public review and comment. This document is the first of its kind in the United States to offer assistance to design professionals and others in accommodating a growing segment of the population who live with the spectrum of vision disorders contributing to Low Vision.

The LVDC actively presents its findings at conferences focused at all disciplines within the building industry, particularly architects and building owners and operators. Since March 2015, committee members have done five presentations to national audiences and nine presentations to state/local audiences. The Committee continues to pursue development of the guidelines into a standard that can be more widely applied across the industry.

For more details on the LVDC’s work see [https://www.nibs.org/?page=lvdc](https://www.nibs.org/?page=lvdc).

*Principle 8: undertake initiatives to promote greater environmental responsibility.*

**Beyond Green Awards**

Through its Sustainable Buildings Industry Council (SBIC) the Institute annually conducts the Beyond Green High-Performance Building and Community Awards to recognize the initiatives that shape, inform and catalyze the high-performance building market, as well as the real-world application of high-performance design and construction practices. In 2015, the Awards recognized three projects and initiatives for their leadership in sustainability and other high-performance building goals. Four projects were recognized in 2016.

The Awards are presented during Building Innovation, the Institute’s Annual Conference and Expo, which brings together hundreds of representatives from across the building industry. In addition to recognition at the Award’s ceremony, the winning entries are converted into case studies, which appear on the Institute’s WBDG Whole Building Design Guide®. As discussed
below, WBDG is a widely accessed resource for sharing best practices and other information with the building industry.

Zero Energy Building Definition
The Department of Energy, in collaboration with the Institute, initiated a process beginning in 2014 to work with a large, diverse set of building industry stakeholders to develop its common definition for what it means to be a zero energy building.

After leading an extensive stakeholder engagement process, the Energy Department released its findings in the recently published *A Common Definition for Zero Energy Buildings*, which states that a Zero Energy Building (ZEB) is “an energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy.” This definition also applies to campuses, portfolios and communities. In addition to providing clarity across the industry, this new DOE publication provides important guidelines for measurement and implementation, specifically explaining how to utilize this definition for building projects.

By clarifying what it means to be a zero energy building, this definition will help more building owners determine if developing a zero energy building is right for them. By creating this common definition for zero energy buildings, building owners and project teams can now better focus their effort on implementing strategies to improve the performance of their buildings.

Thousands of project teams throughout the country are looking to push the envelope and achieve a zero energy building. In fact, the number of zero energy buildings doubled from 2012 to 2014 across 36 states, according to the New Buildings Institute (NBI). Since 2014, the number of zero energy and ultra-low energy buildings in the U.S. has continued to grow, reaching 394. The growth of zero energy buildings has highlighted a lack of clarity and consistency across the industry on key definitional issues that increasingly were the source of market confusion, underscoring the need to develop a commonly accepted definition and approach.


Commercial Workforce Credentialing Council/Better Buildings Workforce Guidelines
The Institute and the U.S. Department of Energy (DOE) have developed voluntary national guidelines, known as the Better Buildings Workforce Guidelines (BBWG), to improve the quality and consistency of commercial building workforce credentials. The Institute established the Commercial Workforce Credentialing Council (CWCC) to lead development of those guidelines.

Improving the operational performance of commercial buildings requires highly skilled and qualified workers, particularly as building technologies become more advanced. Yet the lack of national guidelines for energy-related professional credentials represents a major barrier to the quality, consistency and scalability of this workforce. The BBWG initially addressed commercial building workforce training and certification programs for four key energy-related jobs: building energy auditor, building commissioning professional, energy manager and building operations professional.
The purpose of the BBWG is to reduce the confusion and uncertainty around workforce credentialing; lower costs; and support better credentials, better workers and better buildings. The BBWG set an industry-validated Job Task Analysis (JTA) for each job title, as well as certification schemes (blueprints) and learning objectives for training programs.

Since establishing the Guidelines, two certifications have been recognized by DOE as meeting the requirements and additional organizations are undertaking the steps necessary to achieve recognition.

For more information on the Council and the Guidelines see https://www.nibs.org/?page=cwcc.

Council on Finance, Insurance and Real Estate
It takes involvement from all sectors of the building industry and a holistic view of the construction process—from the original design concept on through to final demolition decades later—to achieve high-performance buildings. Banks, insurance companies, appraisers and real estate firms all play a significant role in how such buildings are procured, designed and constructed. How these different segments evaluate the risk associated with particular projects, technologies and practices can have an enormous impact on whether a specific idea gets the funding and insurance needed to move forward to fruition. However, banks, insurance companies, appraisers and real estate firms often lack the necessary data to support building industry efforts to go beyond "business-as-usual." The Council on Finance, Insurance and Real Estate (CFIRE) examines the intersection of finance, insurance, investment and design, construction and ownership to encourage the development and assist in the affordability of high-performance buildings.

The Council has produced two highly influential reports identifying barriers to widespread investment in energy efficiency and renewable energy and offers recommendations to overcome these barriers. *Financing Energy-Efficiency and Renewable-Energy Projects* examines the current and potential roles of three key equity investing structures in capitalizing the sustainable and energy-efficient development and retrofit of investment-grade commercial buildings and renewable-energy production. The report evaluates the effectiveness of these vehicles—Real Estate Investment Trusts (REIT's), Master Limited Partnerships (MLPs) and Yieldcos—in accessing the public capital markets and recommends needed legislative and regulatory changes.

The CFIRE report, *Financing Small Commercial Building Energy Performance Upgrades: Challenges and Opportunities* includes findings and recommendations on the financing of small commercial retrofit projects for energy efficiency. Small commercial buildings (generally defined as less than 50,000 square feet) make up the majority of the nation’s building stock by both number and area (93.9 percent and 49.5 respectively). Yet, despite this vast segment of the building stock, investments in energy-efficiency retrofit projects for small commercial buildings have lagged behind those for larger buildings.

The reports have been widely circulated including through inclusion in university classes and industry presentations.
Energy Codes and Life-Cycle Energy Performance
The Institute has been working with a diverse group of stakeholders from across the industry to advance building energy codes and reduce energy use through increased focus across the building life-cycle. The Institute has championed the development of outcome-based compliance paths within the International Green Construction Code (IgCC), International Energy Conservation Code (IECC) and ASHRAE Standard 189.1. An outcome-based compliance path was successfully incorporated into the 2015 IgCC. While not successful for inclusion in the 2018 IECC, the Institute and its collaborators will produce a guideline to be released in 2017 for communities who wish to implement such an approach.

An outcome-based approach focuses on actual, measured energy use to determine compliance rather than strictly design-based strategies, which may or may not result in actual energy savings.

In addition to code-based approaches to advancing energy performance, the Institute has spearheaded an effort to look more holistically at how cities and other stakeholders can encourage a holistic and coordinated approach to reducing building-related energy use at all stages in a building’s life cycle.

The Institute has presented on this work in numerous industry forums including code hearings, the Getting to Zero Forum, the DOE Energy Codes Conference, the Building Codes Assistance Project Summit and the ACEEE Summer Study on Energy Efficiency in Buildings.


WBDG Whole Building Design Guide®
The WBDG is the Institute’s main dissemination tool to the industry. In addition to design criteria for federal government projects, the site provides best practices on high-performance building attributes, case studies on successful high-performance building projects, and continuing education courses for industry professionals and others. Through application of the principles contained within WBDG, buildings can be more sustainable and meet the goals espoused in the Guiding Principles.

WBDG attracts approximately 600,000 unique visitors and 7 million document downloads a month.

To learn more visit [www.wbdg.org](http://www.wbdg.org).

Energy and Water Efficiency in Stadiums and Arenas
Stadiums and arenas are essential components in the fabric of sports and they serve a significant role in communities across America. At the same time, many communities, organizations and sectors of the economy are prioritizing the need to reduce energy and water use. By bringing together expectations for energy and water efficiency goals with the powerful influence of sports, American communities can achieve significant savings while also inspiring an enormous number of fans to take action. Working with the Department of Energy and the Green Sports Alliance, the Institute set out to determine how stadiums and arenas use energy and water and how stakeholders can come together to reduce such use while saving money.
The team undertook a literature review; conducted workshops and webinars; launched an industry survey; and interviewed representatives from across the sports industry. More than 125 industry representatives participated in these activities, and an additional 20,000 stakeholders received information on the project. The final report, *Taking the Field: Advancing Energy and Water Efficiency in Sports Venues*, was released in February 2017 and has already been downloaded by several hundred interested stakeholders.

Download the report at [https://www.nibs.org/page/TakingTheField](https://www.nibs.org/page/TakingTheField).

**Principle 9: encourage the development and diffusion of environmentally friendly technologies.**

**Off-Site Construction Council**
The Institute has identified the increased utilization of off-site construction as a means to achieve industry and government-related performance goals including reduced resource use, increased worker safety and enhanced quality. The Off-Site Construction Council (OSCC) serves as a research, education and outreach center for relevant and current information on off-site design and construction for commercial, institutional and multifamily facilities.

In furtherance of this role, the OSCC has produced or correlated resources to advance the utilization of off-site construction. These resources include resource pages and project case studies on WBDG, a webinar series and industry surveys. The Institute has also served as a host of the annual Offsite Construction Expo, which features vendor exhibits and educational sessions. The webinars have attracted several hundred participants and interest in the utilization of off-site construction techniques and technologies have grown significantly.

**Building Enclosure Technology and Environment Council**
The Institute’s Building Enclosure Technology and Environment Council (BETEC) is charged with encouraging optimum energy use of buildings through a better understanding of how overall, complex building components interact with each other and with the environment. BETEC has been working with ASTM International to develop educational tools to advance utilization of building enclosure commissioning as a means to advance enclosure performance. The Council also hosts the Building Enclosure Science and Technology (BEST) Conference every three years to share best practices and advancements in enclosure technology. BEST4 was held in Kansas City, Missouri in 2015. BETEC also maintains the Building Enclosure Design Guide, which is hosted on WBDG.

Several thousand industry members participate in BETEC and local Building Enclosure Councils.