



Moving Forward

Findings and Recommendations from the Consultative Council

Buildings and their related infrastructure are the essential backbone of the nation. However, few people outside the building industry recognize the complexities of designing, constructing, operating and maintaining buildings or how policies can support the development of high-performance buildings. The National Institute of Building Sciences Consultative Council brings together leading organizations from across the building community to make findings and recommendations to minimize these complexities, with the goal of improving the built environment.

The Council's 2010 report focuses on five key areas where progress can be made through discussion and support by the entire building community. These areas are:

- Defining High-Performance and Common Metrics
- Energy and Water Efficiency
- Codes and Standards Adoption and Enforcement
- Sustainability
- Education and Training

While in-depth findings and recommendations are provided in the Council's report, this fact sheet provides a brief overview of those of greatest importance or that are immediately actionable.

Achieving High Performance Requires Shifting Norms

The optimization of building attributes as defined in the Energy Policy Act of 2005 (EPAct) and the Energy Independence and Security Act of 2007 (EISA) will result in high-performance buildings. However, specific changes are necessary to allow such results. In order for standards and measures to be meaningful, they must be capable of being uniformly measured, expressed and understood by all users. In the context of high performance, that means addressing four measures: baseline, benchmark, measured results and

a performance results index (PRI). Such measures, and the means and methods to achieve their thresholds, should be based on standards developed by accredited standard development organizations (SDOs).

Codes and standards should shift away from prescriptive requirements towards performance-based provisions aimed at ultimately achieving net-zero energy use. If the nation is to achieve net-zero energy performing buildings, it will be important for the building community to have a greater understanding of the cost/benefit variables to make informed decisions regarding which technologies to prioritize, develop and implement.

Investment in Codes and Standards and Education and Training is Essential

Currently, at the state and local level, where code adoption and enforcement is largely conducted, the lack of financial and technical

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resources is significantly affecting the ability to ensure the requirements provided by codes and standards are satisfied and the inherent benefits are achieved. The design and construction sectors also need resources and training to assure effective compliance. Policymakers and the public often misunderstand codes and standards development, adoption, compliance and enforcement. Increased financial and technical participation by government, working in concert with the states in the code and standard development process, would yield more uniformity and consistently adopted and understood codes and increase the effectiveness of model building codes.

Within the building professions, education and training should be aimed at facilitating the entire life-cycle of buildings, from concept to design, construction, commissioning, occupancy, modification/renovation and deconstruction. While education and training when someone enters a particular career is essential, training must be continual. Best practices go stale, equipment and processes change and new regulatory requirements are enacted. To assure such education and training is sought and retained, their delivery must be dynamic, engaging, readily available and affordable.

Changes in communication channels are needed because buildings are becoming more automated and technologies and management processes used to operate, maintain and minimize energy consumption require increasing levels of integration.

Education and training incentive programs should be available to cover all levels and types of businesses and organizations and should encompass all construction, maintenance and operational core competencies in the three primary building sectors: residential, commercial and industrial. Incentives are needed to motivate businesses and organizations to look beyond short-term, financially driven bottom lines and look to the future in preparing our workforce for the challenges, complexities, technologies and competitive demands of our global economy.

Sustainability and Efficient Resource Use Will Drive Results

Achieving sustainability requires addressing the triple bottom line of economic growth, environmental stewardship, and social progress in all building and infrastructure projects. Studies are needed to demonstrate increased public and private returns on investments in sustainable building and infrastructure in order to

attract the financing required to produce them. Appropriations for public construction should address life-cycle costs and benefits and policies for accounting, financing, insurance, and taxes should facilitate and promote private investments in sustainable buildings and related infrastructure. Budgeting and organizational practices, in both the public and private sectors, also should facilitate achievement of lower life-cycle costs.

As a subset of sustainability, policymakers and the building community must focus on energy and water use. Investment in our energy and water-related infrastructure is desperately needed. Programs aimed at repairing and replacing aging infrastructure will vastly improve efficiencies and create jobs. A national water strategy must be a priority. The very conservative approach of utilizing potable water for nearly all applications may not be sustainable in an era of constrained supplies. Government and the building community should support development of codes and standards that establish requirements for efficient use of water and the safe use of alternate water sources, such as reclaimed water, rainwater and gray water, and efficient outdoor irrigation practices.

For more information on the Consultative Council and a copy of the full report, contact Ryan Colker, Director, Consultative Council, at rcolker@nibs.org, (202) 289-7800, ext. 133.