ASHRAE: ENGINEERING FOR SUSTAINABILITY

ASHRAE’s Sustainable Commitment

Even without rising energy prices, the threat of global warming, and a rapid decrease in our nonrenewable resources, creating sustainable built environments would be the responsible way to preserve our planet’s resources for future generations. With that in mind, ASHRAE has pledged to become a leader in sustainability by increasing the stringency of the U.S. national building energy code (ANSI/ASHRAE/IESNA Standard 90.1) by 30% by 2010, developing guidance that will lead to net-zero-energy buildings by 2030, and publishing the nation’s first standard for the design of high performance green buildings.

Currently, buildings are responsible for 40% of all energy consumption. Sustainable buildings achieve high performance over the full life-cycle in the areas of consumption, atmospheric emissions, discharge of harmful liquid effluents and solid wastes, negative impacts on site ecosystems, and quality of indoor environment. ASHRAE is working to create a world with net-zero-energy buildings that consume annually only the energy provided by on-site renewable energy sources.

The ASHRAE Headquarters – Walking the Talk

ASHRAE recently renovated its Headquarters in Atlanta as a “sustainability showcase,” featuring state-of-the-art HVAC&R systems and other sustainability measures. The building incorporates ASHRAE technology and demonstrates its strong commitment to sustainability.

Building EQ

ASHRAE is working on a building energy labeling program to provide motivation for reducing energy use in commercial buildings by expressing the energy performance of buildings in a tangible way. The ASHRAE labeling program differs from existing labeling programs in that it focuses solely on energy use. ASHRAE’s label will help building owners differentiate their product in a technically sound manner while providing tenants with the tools they need to select energy-efficient spaces. More information can be found at www.buildingeq.com.

Green Building Standard

Standard 189.1P, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings, will be the first high-performance green building standard in the U.S. Being developed by ASHRAE, the Illuminating Engineering Society and the U.S. Green Building...
Council, the standard will serve as a benchmark for sustainable buildings. It is slated for publication early next year.

**Market Transformation – Advanced Energy Design Guides**
ASHRAE and several building organization partners are writing a series of guides that provide 30 percent energy savings over minimum building codes. The books, available for free download at [www.ashrae.org/freeaedg](http://www.ashrae.org/freeaedg), address small office buildings, small retail buildings, K-12 schools, and self-storage units, warehouses and highway lodging. It is estimated that the 150,000 copies of the guides now in circulation have resulted in a potential savings of $600 million in energy costs. Future editions will target 50% energy savings and savings in existing buildings.

**High Performing Buildings Magazine**
ASHRAE launched *High Performing Buildings*, a quarterly magazine created to help decision-makers in the building community learn about the latest developments in innovative technologies and energy-efficient design and operation. Targeted at building owners, facility managers, architects and engineers, *High Performing Buildings* features working case studies of exemplary buildings developed by leading practitioners in the sustainability movement. To subscribe for free see [www.hpbmagazine.org](http://www.hpbmagazine.org).

**High-Performance Building Design Professional Certification**
ASHRAE’s certification programs are developed by industry practitioners who understand the knowledge and experience that are expected for superior building design and system operation. Earning an ASHRAE certification assures employers and clients that the certificant has mastered the body of knowledge associated with the respective field.

**Government Affairs**
ASHRAE continues its efforts aimed at producing high-performance buildings through interaction with policymakers in Congress and at federal agencies. ASHRAE led the formation of several building community consortia in response to activities at the Department of Energy and was instrumental in launching the High-Performance Building Caucus to provide support to U.S. Congress on buildings issues. The Washington, DC office also pursues policies aimed at achieving the goals of net-zero energy buildings.

**High-Performance Buildings Congressional Caucus Coalition**
To provide key decision makers with the technical information necessary to encourage development of high-performance buildings, ASHRAE led the formation of the High-Performance Buildings Congressional Caucus and the private sector coalition supporting the caucus. More details on the caucus and the coalition are available at [www.hpbccc.org](http://www.hpbccc.org).