



The Green House: New Directions in Sustainable Architecture and Design

reveals exciting trends in green technology, materials, and design that yield houses and apartments that are as aesthetically compelling as they are environmentally friendly.

Available to begin travel January 2008.

EXHIBITION BRIEF

To go “green” or not to go green is a key question being asked by virtually everyone interested in the future of the American home. Even though ‘green,’ or environmentally sensitive features such as energy-efficient air conditioners, double-pane windows, and kitchen cabinets made with non-toxic materials are being built into almost 20 percent of new homes in areas across the country, many Americans still wonder about the advantages of green housing. What makes a house green? Is a green house healthier, safer, and more comfortable? Is it aesthetically appealing? Can green houses be architecturally attractive, and even beautiful?

The National Building Museum’s acclaimed exhibition *The Green House: New Directions in Sustainable Architecture and Design* is the first to explore the field of green residential design as it reaches a turning point of acceptance by both home builders and the general public. This traveling version, redesigned into a panel format, is planned to allow flexible display in a wide range of non-museum venues and spaces. *The Green House* panel exhibition will begin to travel in January 2008.

The Green House builds on the popular and critical success of the Museum’s pioneering *Big & Green: Toward Sustainable Architecture in the 21st Century*, which focused on sustainable skyscrapers and other large-scale structures and toured to major museums in the United States from 2003 through 2004.

CONTENT

Introduction

There is growing interest in green living and the possibilities for achieving it in our homes are rapidly expanding. Because buildings consume enormous quantities of the earth’s resources in their construction and daily operation, they represent tremendous opportunities for innovative eco-friendly design as well as cost savings. This exhibition demonstrates the emerging collaboration between stylish architecture, interior design, and environmental responsibility.

An introductory animation breaks down world energy consumption from a global to a local scale in the home. It gives visitors context for the exhibition’s message of advocacy for greener living and design, while underscoring the impact their actions and choices at home will have on energy consumption rates around the world.

Five Principles of Sustainability

The Green House exhibition discusses Five Principles of Sustainability that all contribute to making a house “green” in a grouping of panels, several of which have interactive and touchable components.

1. Optimizing use of the sun

Text explains the difference between active and passive strategies to plug into the sun, a free, clean and abundant source of energy. An interactive photovoltaic cell with energy meter is included on this panel so that visitors can explore the direct correlation between the sun’s energy and power production.

2. Improving indoor air quality

Americans spend up to 90% of their time indoors where air quality can be more polluted than the outdoors. Visitors learn about common sources of indoor air pollution that release toxins into the air and provide breeding grounds for allergens. Examples are provided of measures people can take to improve air quality inside their homes and preserve their health.

3. Using the land responsibly

A graphic side-by-side comparison of two houses allows visitors to see how responsible land use can affect the environment, their cost savings, and their level of comfort. Examples show visitors how they can create a sustainable house by making good use of the land their house sits on and by considering the impact of the house on the surrounding environment.

4. Creating high-performance and moisture-resistant houses

While maintaining a constant level of interior comfort is often wasteful and expensive, it can be done efficiently and economically. Visitors will learn the definition of a building envelope, areas of major energy loss in an average house, and ways homes can be made more efficient.

5. Wisely using the Earth’s natural resources

Visitors will see and touch examples of beautiful interior finish materials that are made of renewable resources, have recycled content, are reusable and recyclable, and are durable so that they have to be replaced less often. Text also explains the importance of considering a material’s embodied energy and environmental impact when making materials selections for a house.

Contemporary Green Houses

Beautiful photographic images and drawings of 22 projects from around the world document the emergence of a new brand of sustainable building. Architects and builders now view sustainability as a catalyst for creative home design and have also begun to think strategically about the environmental costs of building. These new houses are conceived as systems with extended life cycles that must meet green standards throughout the design, construction, and living process. Environmental responsibility is an integral, but not always conspicuous, aspect of the contemporary house.

These single- and multi-family dwellings included in the exhibition are organized by geographic region: Desert, Waterside, Mountainside, Tropics, Suburb, City, and Anywhere. Text describes the particular assets or challenges of each region and the unique sustainable responses or strategies employed by the architects. Included in the exhibition are projects by architects such as Americans Rick Joy, Jennifer Siegel and William McDonough, Stuhlmacher + Korteknie (the Netherlands), Peter Carmichael (Australia), Werner Sobek (Germany), Shigeru Ban (Japan), and many others.

Conclusion

Simple steps to achieve a greener, more sustainable home are presented in a series of statistics and 'smart moves' graphics that reiterate the earlier presented five principles of sustainability: optimizing use of the sun; improving indoor air quality; using the land responsibly; creating high-performance and moisture-resistant houses; and, wisely using the Earth's natural resources.

As well, visitors will find a short narrated video set on location of one of the contemporary projects featured earlier in the exhibition that shows of principles of sustainability in context. Architect Michelle Kaufmann gives a tour of her Glidehouse™ in Novato, California, while discussing benefits of living in "green" house.

SUSTAINABLE MATERIALS

All elements of the exhibition are presented on and constructed with green materials including Plyboo® bamboo plywood, Tyvek®, Homasote® board, and FlexForm high density hardboard.. All paints, stains, and varnishes are eco-friendly.

OPEN AVAILABILITY

Space Requirements: 1,500 square feet.

Fees: \$4,000 plus prorated shipping.

Security: Low.

Insurance: NBM provides wall to wall insurance.

Duration of Exhibition: 2 months.

Exhibition Layout: The National Building Museum will work with Exhibitor to create a layout appropriate for Exhibitors exhibition area.

Installation: Exhibitor is responsible for the unloading and installation of the Exhibition. NBM will provide Exhibitor with an installation guide. Estimated unloading and installation time is 1 day.

Contact: Cathy Frankel, Director of Exhibitions, 202.272.2448 ext. 3303, cfrankel@nbm.org.



The **National Building Museum** is America's premier cultural institution dedicated to exploring and celebrating architecture, design, engineering, construction, and urban planning. The Museum is located at 401 F Street NW, Washington, D.C. Museum hours are Monday through Saturday from 10 am to 5 pm and Sunday from 11 am to 5 pm. Admission is free. Museum Shop. Café. Public inquiries: 202.272.2448 or visit www.nbm.org