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2012 DESIGN AWARDS

Honoring innovative integration of design
and environmental performance

VISION 2020 pg.15

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- Complete Web-exclusive coverage of the EcoHome Design Awards, including slideshows of each of the winning projects
- Case studies of green homes from across the country
- The latest news from the yearlong Vision 2020 research project

Cover Story

2012 EcoHome Design Awards

From great affordable and multifamily developments to a wide range of custom homes, meet the 17 winners of our annual awards for innovative design of high-performance housing. [Pg. 25](#)

Review

Bamboo Flooring

Long viewed as “the” rapidly renewable green choice for flooring, bamboo has been under fire lately over questions about its overall sustainability. Here’s a look at the latest selection criteria and product options. [Pg. 45](#)

Departments

Editor’s Note

We need to bring sustainable design into a new era where standardized high-performance features, building science details, and sound construction principles are implicit in every project, freeing us to focus again on the architecture. [Pg. 9](#)

EcoUpdate

PV market gains traction • New technical report on insulation products • Massachusetts renovation meets the 1,000 Home Challenge • Zero-VOC paint colorants • EcoBriefs. [Pg. 11](#)

Vision 2020

Appliance standards paying off • European test criteria for windows • KB Home creates critical mass for net-zero markets • Health improvements from energy retrofits • The latest online reports. [Pg. 15](#)

AIArchitect

The PISE method, a variant of rammed-earth construction, provides thick walls that help to save energy on heating and cooling and require no painting or other maintenance. [Pg. 23](#)

New + Notable

A 1-gpf toilet, a solar-powered attic fan, recycled tile, a Web-enabled thermostat, a planted wall system, and more. [Pg. 51](#)

GreenWatch

Photovoltaics manufacturer Semprius, Inc., sets a new benchmark for PV efficiency with a new print transfer process and prepares to bring the technology to market. [Pg. 56](#)

COVER PHOTO (NEW ENGLAND VACATION HOUSE): GREG PREMUR PHOTOGRAPHY

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2012 ECOHOME

DESIGN AWARDS

Every year we witness a deepening awareness and maturity in sustainable design, but nowhere is this more evident than in the projects submitted for consideration in our EcoHome Design Awards program and in the outstanding projects ultimately selected to receive the awards.

This year's 17 award-winning projects show continued progress in environmental design and demonstrate that the integration of rich architectural design and true technical performance is clearly taking hold. From new to remodeled homes and multifamily to affordable housing, these projects provide shining examples of design solutions that provide sustainable shelter in a wide range of styles, locations, and costs.



THE 2012 ECOHOME DESIGN AWARDS JURY

JOHN BARROWS
J. Barrows, Inc.
Wainscott, N.Y.

TEDD BENSON
Bensonwood Homes
Walpole, N.H.

MICHELLE DESIDERIO
NAHB Research Center
Upper Marlboro, Md.

ASA FOSS
U.S. Green Building Council
Washington, D.C.

MANNY GONZALEZ, AIA
KTYG Group
Santa Monica, Calif.



NEW ENGLAND VACATION HOUSE

CUSTOM, LESS THAN 2,000 SQUARE FEET Newport County, R.I.

This vacation residence on the Rhode Island coast packs performance-enhancing features and an inviting contemporary aesthetic into a pared-down package. Architect Stephanie T. Horowitz designed the compact form to provide exceptional energy efficiency, keep costs low, and meet the client's request for a small environmental footprint.

The smart, streamlined design loads plenty of storage and amenities into the 1,300-square-foot retreat, including two bedrooms plus a sleeping loft; two bathrooms; and an open kitchen, dining, and living area. The interplay of warm, comfortable interiors and high-performance features created a synergy the judges couldn't resist. "There is a harmony here between design and performance," they raved.

The jury was equally impressed with the combination of Passive House-inspired strategies that reduced the home's heating requirements to one-tenth that of a similar new code-built home.

Project planners relied on exceptional insulation (R-44 walls, R-50 foundation, R-60 roof), extreme attention to thermal bridging and air sealing, and ultra-efficient windows. By siting the house for maximum solar gain (while optimizing a north-facing view), Horowitz and her team reduced the heating needs to a single 10-HSPF Mitsubishi air source heat pump.

For healthy indoor air in such a tightly built dwelling, Horowitz included a Zehnder ComfoAir 200 HRV, polished concrete floors, and zero-VOC Poggenpohl kitchen cabinets. Other sustainable products include recycled quartz countertops, a heat-pump water heater, a high-efficiency washer and condensing dryer, and WaterSense-certified plumbing fixtures and toilets. —J.G.

The owners, who keep track of energy use with the home's e-Monitor system, sought a private retreat that was rightsized for their family.

DETAILS

Size:
1,300 square feet

Cost:
Withheld

Completed:
July 2011

Certifications:
LEED-Gold, Energy Star

HERS Rating:
41

Architect/Verifier:
ZeroEnergy Design, Boston

Builder:
Aedi Construction, Waltham, Mass.

GREEN HIGHLIGHTS

Energy:

XPS, closed-cell spray foam, and cellulose insulation / double-stud wood framing 24 inches o.c. / Schuco U-0.13 windows with 0.60 SHGC / GreenGuard rainscreen and housewrap / all CFL lighting / Powerhouse Dynamics e-Monitor energy-monitoring system / Energy Star appliances / LG high-efficiency washer and condensing dryer

Resources:

Boise Cascade engineered I-joists / Caesarstone recycled quartz countertops / locally sourced bluestone patio

IAQ:

Zehnder ComfoAir 200 HRV / no-VOC Poggenpohl kitchen cabinets / polished concrete floors / Benjamin Moore and Ecos zero-VOC paints

Water:

GE GeoSpring heat-pump hot water heater / WaterSense-certified plumbing fixtures and toilets / PEX tubing / permeable gravel walkway / drought-tolerant grass and native plantings

For more information about this project, including a slideshow of images, go to http://go.hw.net/EHDA2012_NewEngland.