



THE WOODS HOLE RESEARCH CENTER

149 Woods Hole Road · Falmouth, MA 02540-1644 USA
Telephone 508.540.9900 · Fax: 508.540-9700 · www.wbrc.org

Woods Hole Research Center Hosts Energy Workshop

January 24, 2006

On Tuesday, January 24, 2006, the Woods Hole Research Center hosted a full day workshop entitled Toward Zero Net Energy Homes. Architects, builders, engineers, representatives from solar and building efficiency trades from Woods Hole to Boston to Provincetown came to learn both the quantitative and qualitative importance of building construction and sequencing methods in creating highly efficient homes, for costs similar to standard construction.

According to Joe Hackler, a research associate with the Center and avid renewable energy advocate, "Recent increases in energy costs and increasing awareness and concern about climate change seem to be driving keen interest in significantly improving the energy efficiency of the homes we build. Yesterday's strong turnout and good discussion shows that."

Marc Rosenbaum, P.E., with Energysmiths outlined the methods for achieving homes that require little or no non-renewable energy to power them. Concepts explored including air infiltration and insulation, ventilation requirements, building forensic analysis, strengths and limitations of different types of insulation, as well as strategies for incorporating solar energy gains into a home, as well as biomass (wood and pellet) fuels, the importance of sealed combustion systems in very tightly constructed homes, and host of other practical building and energy supply issues.

According to Bruce Torrey, of Building Diagnostics in Sandwich, "The workshop made me aware of existing opportunities in engineering and technology currently awaiting the building community. There is huge room for improvement in building highly efficient homes, and Marc was able to make this case from buildings that actually exist."

Hackler added, "These buildings do not look much different from what we are accustomed to seeing. They just use 80 percent less energy."

The workshop was sponsored by a partnership of organizations active in promoting environmental stewardship through the means of increasing energy efficiency in homes and businesses, as well as promoting the burgeoning field of energy supply from clean, locally available, renewable sources. In addition to the Center, sponsors included Cape Cod Community College, Cape Cod Economic Development Council, Cape and Islands Self-Reliance, Home Builders and Remodelers Association of Cape Cod, and Waquoit Bay National Estuarine Research Reserve

The Center's main facility, located in Woods Hole, Massachusetts, was completed in 2003 and is a high performance facility producing more energy than it consumes, and operating without the combustion of fossil fuel, the primary contributor to global warming. The building received a first prize in the 2004 Northeast Green Building Award, given by the Northeast Sustainable Energy Association (NESEA), in the "places of work (small buildings)" category. In recognition of Earth Day 2004, the American Institute of Architects (AIA) cited the Ordway Campus as one of the nation's ten best examples of "green design" in the AIA/COTE 2004 Top Ten Green Projects competition.



This Oregon home utilizes many of the renewable technologies discussed at the workshop. Credit: Energysmiths, Inc.