

GUEST SPEAKER IN EUROPE AND ASIA

Frank Dalene of Telemark pushes building into science

By Denis Sheahan



Gwen and Frank Dalene

Frank Dalene, president of Telemark, is a man of many parts.

Not only is Dalene a builder with a highly regarded East End reputation, but he is an advocate for many initiatives.

"My mission is now to bring building into science," Dalene said. "I want to push the envelope on sustainable and resilient building."

In order to accomplish his goals, Dalene has embarked on an incredible personal agenda of joining and working with organizations from East Hampton to Asia and Europe.

He has been married to Gwen for 39 years

and they have a daughter, Kat, who is an architect and works for the architectural firm of Bates & Masi.

Dalene has come a long way since he and his father started Telemark, Inc., a nationally known construction services company, in 1979. Through Da-



lene's leadership, the firm is a pioneer in the use of alternative energy sources such as passive and active solar, and geothermal, for residential construction.

He has led the effort to create the Hamptons Green Alliance, organized to promote green building and maintenance practices. In fact, Dalene developed a mathematical formula that determines the carbon footprint of any manufactured product. His "Carbon Factor Index" earned him a spot as a panelist with scientists from around the world at New York State's premier 2009 Advanced Energy Conference.

Dalene is the founder and chaired the Lions District 20-S Gift of Life Committee. He served on the East Hampton Town Energy Star Committee, East Hampton Town Large Homes on Small Lots Committee and currently is chairman of the East Hampton Town Energy Sustainability Advisory Committee. Dalene is the founder and chairman of the USGBC-LI Chapter East End committee. He serves on the board of directors and executive committee as treasurer of the Peconic Institute.

"My contribution in the Peconic Institute is to help provide the 'how' of implementing transforma-

tional technologies into green, sustainable, resilient and smart built systems," he said.

"Building science isn't science per se, perhaps it's engineering and perhaps it's the application of sciences but it doesn't rise to the level of scientific critical review."

In 2012, Dalene spoke at the Net Zero, Low Carbon Building, Design and Construction Seminar with two presentations, "Net Zero and Low-Carbon Building" and "Southampton's HGA House - A Case Study."

What would rise from the ashes is one of the first provable models of net zero, carbon neutral green living.

The Southampton home now known as the "HGA House" was awarded LEED platinum certification by U.S. Green Building Council (USGBC) for achievement in green homebuilding and design. The original home was destroyed by fire in late 2009. Dalene and the Hamptons Green Alliance (HGA) teamed up with a consortium of green craftsmen, suppliers and architects Richard Stott and Craig Lee to rebuild



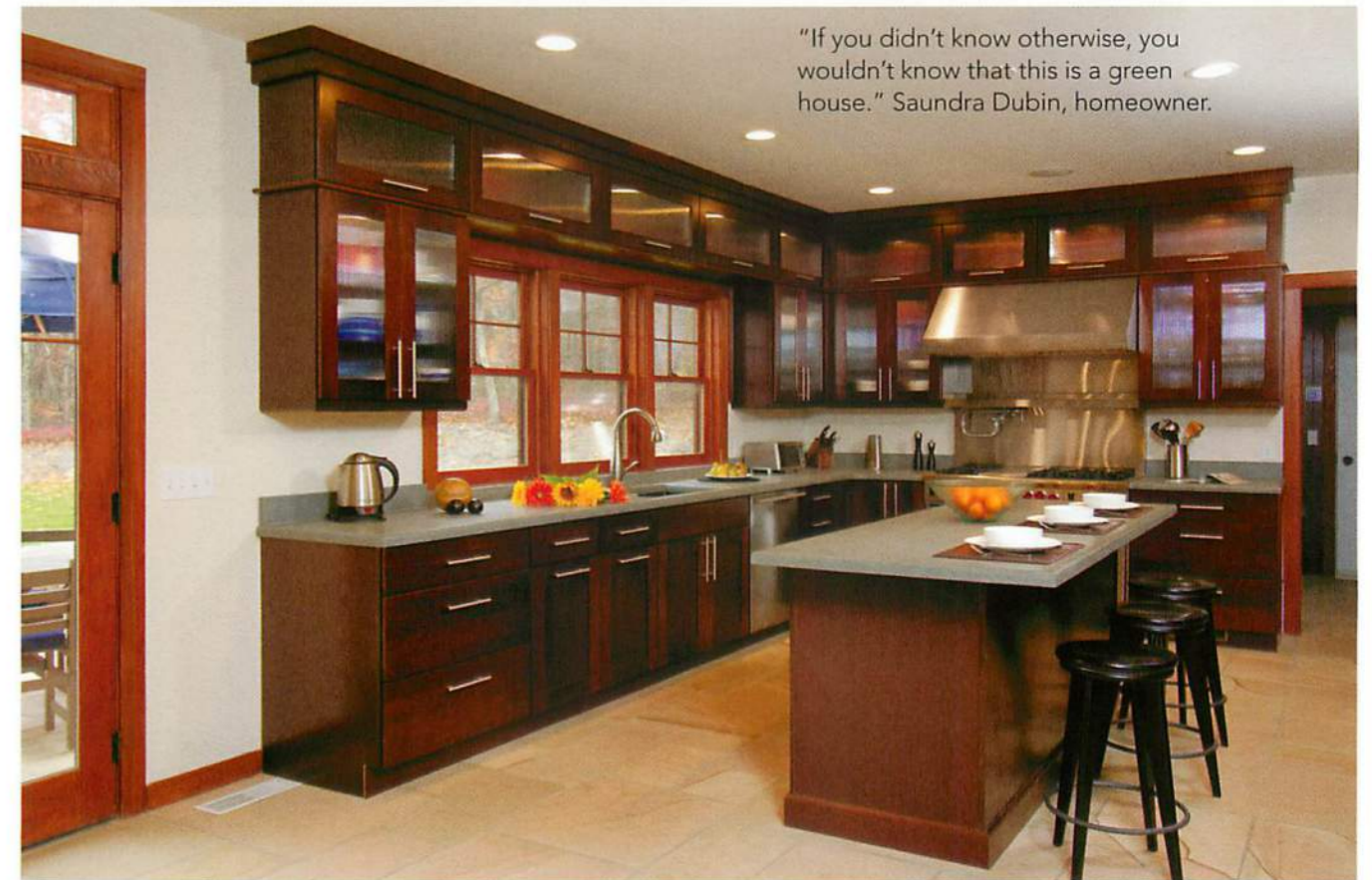
South facing front of house used Building Integrated Photovoltaic (BIP), Thin Film, on upper roof for main electric production and Solar Thermal, evacuated tube, for domestic hot water, pool heat and supplementing geothermal hot water heat to air handlers.



All woodwork, interior and exterior, used throughout the home was created from recycled lumber.



Expansive ceilings along with natural light and LED technology, all contribute to reaching 70% total energy reduction.



"If you didn't know otherwise, you wouldn't know that this is a green house." Sandra Dubin, homeowner.

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This technologically-advanced home features green innovations such as a super insulated shell, geothermal heating and cooling, evacuated tube solar thermal hot water, thin film photovoltaic solar power, LED lighting and a rain water harvesting system.

The ground breaking HGA house brought building into science, culminating in Dalene's peer-reviewed paper being published in the American Institute of Physics' *Journal of Renewable and Sustainable Energy* in July 2012.

"Even though I was honored and pleased with the results, this is just the beginning; I am seeking to build more projects that will push the envelope, attain

higher goals than what we achieved at the HGA House, continuing to implement the scientific method and the process of critical review," he said.

"Built Systems are significant participants in the Nexus of Energy – Water – Food. All buildings worldwide combined use 40% of global energy, 25% of global water, 40% of global resources and are responsible for one third of

global energy related greenhouse gas emissions," explained Dalene. As global temperatures increase, the critical integration of built and

natural systems rely on the application of transformational science and technology for improving existing sustainability criteria to in-

crease resilience and their interconnectedness with adaptation, mitigation and preparedness." 🏠