

SPOTLESS SKETCH: Kim Torpey of Stronghill Designs created the 2-D vision for the future Center for Green Technology.

eternal sunshine

Eagle Mountain Inc. proves green construction won't put your budget in the red. *by Anne Hoyt*

WHEN A SPRING STORM brought snow earlier this year, Doug Mossbrook jumped on his child's sled and slid downhill to his office at Eagle Mountain, a company that specializes in making the most of forces like gravity that are free for the taking.

Sledding to work, the 47-year-old says, was "a small blip that encapsulated a lot of my beliefs."

Those beliefs are taking shape across Bristol Valley Road in the 21,000-square-foot Center for Green Technology, Eagle Mountain's new headquarters. Construction is scheduled for completion in the fall. This latest of Mossbrook's ventures will point the way to how a business can go "green" while spending the same amount, and dispel the belief that doing so is expensive.

"The building's designed to be an example of what can be done with existing technology," Mossbrook says. Pyramid-shaped skylights will flood the building with daylight, lessening the need for artificial light. When the lights come on, they will mimic sunlight's full spectrum and adjust to ambient light levels. Buried loops of pipe will tap into the temperature of the earth to provide energy for the heating, cooling, and hot water systems.

Earth berms and vegetation planted on the roof will buffer the building from the extremes of summer heat and winter cold, and the parking lot will feature a weight-bearing grid that allows grass to grow in high traffic areas. Run-off

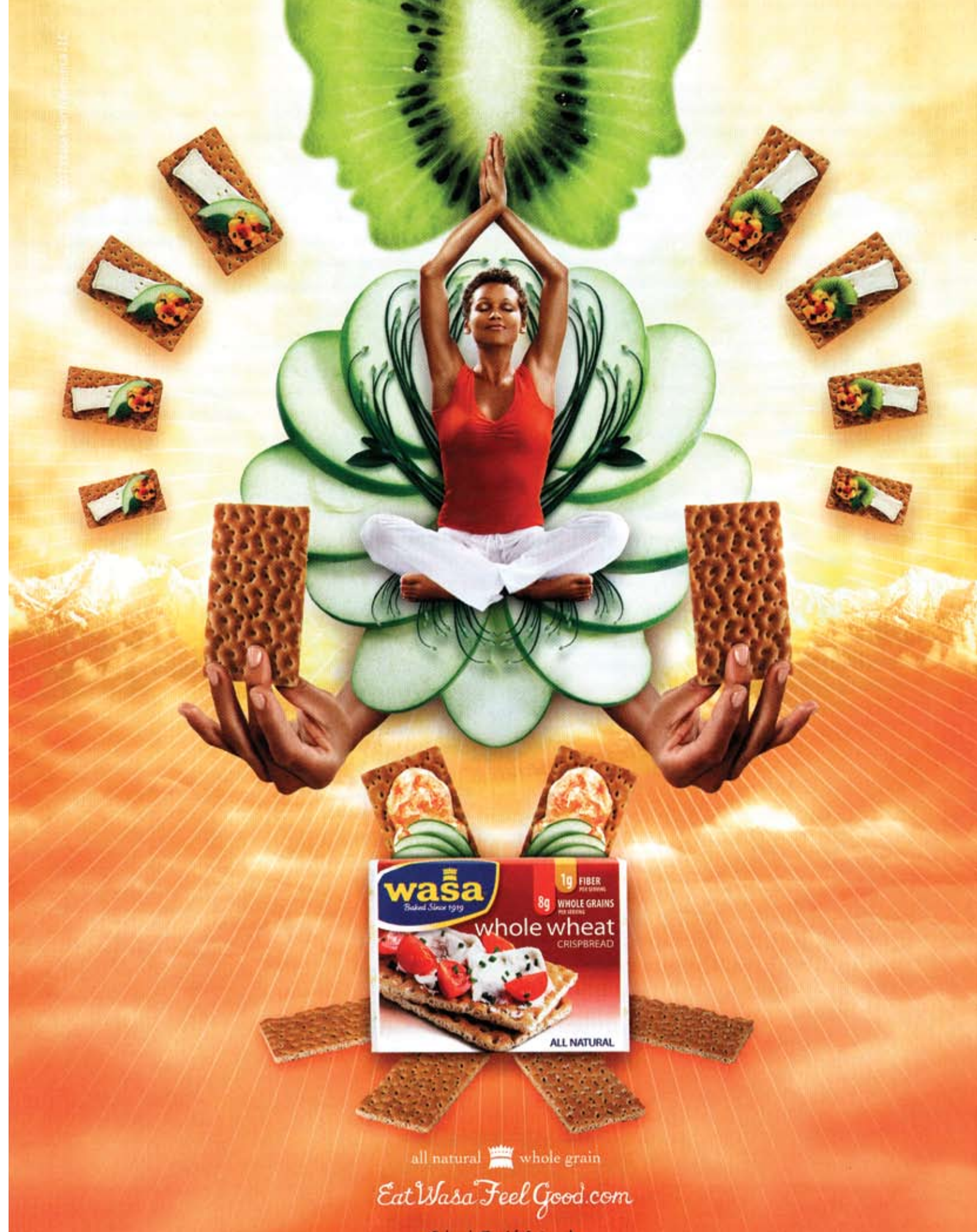
from the roof will cycle through low-flow toilets. Solar panels and a windmill churn out power. The building's steel skeleton, composite walls, rubber roof membrane, and carpets will be from recycled materials.

All of this, including employees bicycling and sledding to work, will make the Center for Green Technology eligible for a prestigious U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating. The Green Building Council reports 6,807 LEED-registered commercial buildings worldwide. Mike Manikowski, executive director of Ontario County's Office of Economic Development, says the center's certification will be the county's first. Manikowski believes this enterprise fits with the county's goals to promote growth in technology.

Eagle Mountain tests, sells, designs, and installs its systems. Mark Tolbert, Eagle Mountain's 36-year-old director of business development, expects to spend no more than what it costs to build a similarly sized building using traditional materials in a traditional design. At this point, estimates are putting costs at \$100 per square foot, which falls within the usual cost for a commercial building of \$80 to \$150 per square foot, Tolbert says. The center's energy demand will be 20 percent of what a conventional building would consume.

Tolbert speaks from his desk, located in a closet, in Eagle Mountain's current facility, which is about

KIM TORPEY (RENDERING); ISTOCKPHOTO (ICON)



one-seventh the size of the new site. He is one of several employees who share conference rooms and use closets as offices while the company has more than doubled its workforce in five years and has seen as high as 60 percent annual growth, Tolbert says.

Tolbert has spent 12 years at Eagle Mountain after leaving for a period in the 1990s. He returned about three years ago. "I'm not what you'd call a tree-hugger, but it makes a difference to me what I do," he explains.

Mossbrook started down this path 30 years ago when his work in the construction field took off in two separate directions. Mossbrook Construction specialized in commercial properties while his other business, Eagle Mountain, built homes using traditional post-and-beam construction. While Mossbrook found homeowners receptive to his growing expertise in alternative energy systems, his commercial customers remained leery of what they saw as costly, unproven technologies.

In 1993 he sold both businesses, retaining the name Eagle Mountain, and launched into marketing alternative energy systems. "1993 was an awesome year when finally I was able to step into something that I'd believed in for a long time. That's when Eagle Mountain, as an alternative energy vendor, could support itself. I took the dive and made that commitment," Mossbrook says. With the Center for Green Technology, he expects his customers to come from the commercial sector.

The upfront cost for green technologies keeps going down as they become mainstream, says Don Lavada, Director of Marketing and Economic Development for the New York State Energy Research and Development Authority (NYSERDA). Initial costs are offset, he says, by a 30- to 50- percent reduction in operating costs over the life of a commercial building. "Beyond that, there are the health aspects and the impact on morale and productivity," he says. "People are healthier, their morale is better, and there is a whole body of research showing that employees are more productive."

The geothermal heating and cooling systems that Eagle Mountain retails, can cost \$16,000 to \$20,000 with installation, twice what a high-efficiency, hot-air system might cost. In eight years, the extra cost is recouped from savings garnered from lower utility bills, Tolbert



BOILING POINT: Doug Mossbrook uses geothermal pumps, like the one behind him, to transfer heat captured from the earth to warm buildings.

says. Because the systems seem to last indefinitely, the payback continues for years, he adds.

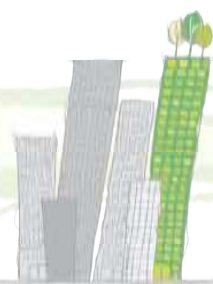
Industry groups such as the nonprofit Urban Land Institute say there has been a paradigm shift within the development community over building green. The question shifts from why to how, according to a press release on the organization's website.

Demand has grown for training. By the end of this year, NYSERDA, which administers classes for systems installers, will have added nine new permanent training centers. Previously, New York had only one permanent center, located in Syracuse.

Mossbrook went through a NYSERDA-sponsored certification program as a geothermal system installer, and he hopes to offer NYSERDA classes on-site in the center's classrooms.

Mossbrook is puzzled by builders' reluctance in warming up to new technologies, especially geothermal systems. He believes they offer tremendous savings. Mossbrook may have the region's greenest buildings, but he hopes the distinction is short-lived as more builders follow.

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STEPHANIE AMARA

