

SPECIAL REPORT: GREEN BUILDING



Melissa Jacobs

Robert Noble, Founder and CEO of Noble Environmental Technologies Inc., said his “goal is to have thousands of factories blanketing the Earth.”

Social Impact

GREEN: As Costs Plummet, Noble Sees Growing Uses for Innovative Building Material

BY **BRITTANY MEILING**

A San Diego based company has turned cardboard, dryer lint, paper — and occasionally even cow pies — into a building material that is lighter and more versatile than its wood, plastic and aluminum predecessors.

Noble Environmental Technologies Inc. (NET) calls the product Ecor, and its applications range from architectural design features to building stage sets and store displays.

Founder and CEO Robert Noble, who is somewhat of an environmental visionary, has founded multiple ecofriendly companies, including San Diego-based Envision Solar International Inc. The company pioneered inventions such as the Solar Tree — a parking structure that shades and charges electric vehicles.

After a trip to Guatemala in the 1980s, during which Noble observed the country’s extreme poverty, he was inspired to find a way to quickly and affordably build housing and temporary shelters.

“I saw the need,” Noble said. “It was an intriguing problem for an architect and an environmentalist to address. And it’s one of the most difficult problems to solve.”

Developing Ecor is a pretty good start. The product is made by

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Photos Courtesy of Noble Environmental Technologies Inc.

Some of the products made using Ecor include 1) A display for a local brewery; 2) A trade show booth; and 3) A flat-pack table for a trade show.

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adding water to sticky fibers, and then adding pressure and heat. It is nontoxic, with no added chemicals, formaldehyde or petroleum. Noble even jokes that you could eat the Ecor pulp, if you were so inclined.

The product isn't the only thing that's green. The manufacturing process produces zero liquid waste and no off-gassing from the use of toxic chemicals.

Multiple Uses

Early in the company's development, NET partnered with the U.S. Department of Agriculture's Forest Products Laboratory to delve into research that would eventually become the intellectual property from which Ecor was created.

"That was the fundamental research," Noble said. "But we are now the commercialization engine. It is our job to take lab technologies and advance them into commercial reality."

Although complete housing units are the end goal, Noble and his team at NET have discovered countless applications for Ecor. In its most simple state, Ecor can resemble a piece of sheetrock and can be used to replace particle board, fiberboard, aluminum, plastic and composites. But that's where the likeness ends. Ecor is 75 percent lighter than conventional panel product — making it ideal for point of purchase displays in retail establishments. NET has designed signage for Whole Foods along with many other local retailers.

Ecor is also strong, but flexible. The pulp can be molded into waves, patterns or spheres; which allows clients to custom engineer their panel products.



Melissa Jacobs

Noble Environmental Technologies Inc. founder and CEO Robert Noble plans a fivefold expansion of the company's Serbian plant.

In fact, NET has attracted clients such as Google Inc., which used Ecor for specialized wavy interior panels to add a modern element to its offices.

Major Expansion Planned

NET's manufacturing facility is in Serbia, where 100 million square feet of Ecor is produced per year. Although manufacturing began at \$3 to \$4 per square foot, the company has managed to bring the costs down to 29 cents per square foot.

"The cost of production is plummeting," Noble said. "If you look at the global trade, you'll see the costs trending down. And as the cost of production goes

down, and the scale of production goes up, new markets open up. We're not that far away from having lower production costs than gypsum board — the cheapest panel product in the industry."

The company just received \$6 million from the sale of securities to two undisclosed investors. Noble said the company plans to use the funds to expand the Serbian facility fivefold in building size and capacity.

NET has four regional operating companies across the globe, with headquarters in San Diego and a strong presence in Europe. Noble's ambition, and Ecor's potential as a building material, have attracted former IKEA executive

NOBLE ENVIRONMENTAL TECHNOLOGIES INC.

CEO: Robert Noble

Revenue: Projected 2014 — \$2 million; 2013 — \$300,000; 2012 — \$150,000

No. of local employees: 20

Investors: Robert Noble, Jay Potter, Rene Hausler

Headquarters: Barrio Logan

Year founded: 2006

Company description: Ecofriendly company creating alternative building materials

Key factors for success: Sustainable product that has a wide variety of applications

Rene Häusler, who recently assumed the position of CEO at NET's European company. NET is currently designing products that soon may find their way onto the shelves of the retail giant.

Noble said his goal for the company is to build these green, sustainable manufacturing facilities all around the world. By having local, regional access to manufacturing centers, the company can cut down on carbon emissions. As Ecor can be made from urban, farm and forest waste, the local facilities could recycle and regenerate materials and reintroduce them into the use chain.

"Our goal is to have thousands of factories blanketing the Earth," Noble said with a laugh. "And you think I'm kidding," he's not. NET is nothing if not ambitious.

The company is set to open its first U.S.-based manufacturing facility in Sacramento in 2015 and is eyeing locations in Denver, Texas, Louisiana and Michigan.

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