

**BUILDING INNOVATIONS**



SPENCER BROWN

**CEO Tom Pounds:** “For every brick we sell instead of a clay brick, we’re both avoiding landfill and preserving natural materials.”

# Building the future brick by brick

## CalStar’s recycled bricks save energy

**BY EMILY WILSON**

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**S**avvy building owners are quick to limit energy use with smart thermostats and good habits, but most buildings emit a significant amount of carbon dioxide before the first LED light is switched on.

“The manufacturing of building products is incredibly energy intensive,” said Tom Pounds, CEO of CalStar Products Inc. “The best example is cement. Five percent of man-made carbon dioxide is coming from cement.”

CalStar addressed this problem by reinventing a basic building material: the brick.

“Clay bricks have been made for centuries by taking clay out of the ground and forming shapes and firing them in kilns at 2,400 degrees Fahrenheit for

several days,” Pounds said. “As a result, every single clay brick you see in the world generated about a pound of carbon dioxide.”

CalStar’s process to make bricks and pavers uses recycled fly ash, a waste material from coal-firing plants, instead of cement. The fly ash acts as a binding agent, so the bricks don’t require firing to harden, meaning they use dramatically less energy and CO<sub>2</sub> to produce.

“We sort of feel like we hit the trifecta,” Pounds said. “Forty percent of the body of our product is recycled material, so for every brick we sell instead of a clay brick, we’re both avoiding landfill and preserving natural materials. The second piece is 85 percent reduction in embodied energy, and the third is 85 percent reduction in carbon emissions.”

CalStar opened its first production facility in January 2010 and launched its bricks and pavers into the marketplace a few months later. The plant has a production capacity of 40 million “brick equivalents.” The company also plans to introduce permeable pavers in the near future as a solution for stormwater

**WINNER**

**CALSTAR PRODUCTS INC.**

**Location:** Newark.

**CEO:** Tom Pounds.

**Founded:** 2006.

**Employees:** 40.

**What it does:** Manufactures building products with minimal energy and carbon footprint and a high percentage of recycled content.

management.

Mark Moxley, a partner at Lake Street Landscape Supplies in Chicago, has been selling CalStar’s bricks and pavers for about nine months. Moxley appreciates the bricks’ smooth surfaces and rich colors.

“I’m encouraged by companies like CalStar,” Moxley said. “They’re a very forward-thinking model that allows products to be sold at a competitive price. I wish other companies would follow their lead.”

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