

## **LUMA Resources is recognized at the International Builders Show in Las Vegas January 19, 2010.**

Link to article:

<http://online.wsj.com/article/SB10001424052748703837004575013381853535228.html>

Correction made below on LUMA Resources using a “multicrystalline” not thin film as described in the original article.

## **Green (Again) at Builders' Show**

By **JUNE FLETCHER**

Once again green products and materials are the stars of the annual International Builders' Show, the annual trade group convention, which opened Tuesday and runs through Friday. But as I waded through the press releases, it strikes me that many of the products and building systems being touted as environmentally-friendly are anything but new—in fact, some are decades old.

That's not to say that everything is a rerun. Though most manufacturers have seen their profits plummet over the past difficult year, they still must launch a few new products to keep their buzz fresh. The latest offerings include environmentally friendly downlights from Cooper Lighting, wood doors certified as responsibly grown from Marvin and deck material partly made from power-plant fly ash from LifeTime Composite.

Still, I am most intrigued with the more venerable green products and building systems—ones that already have run the gauntlet of government and independent tests, and have long been exhibited at past builder conventions. Why, I wonder, do I consistently see these products in show houses, but not so much in regular houses?

Here's a look at some perennial green products which, despite their advantages, have so far failed to catch on:

**Spray foam insulation:** For six decades, spray foam insulation has been available to contractors, touted as a lightweight, airtight and highly effective insulation and sound-insulator that fills small gaps better than loose fiberglass fill or batts. But according to Freedonia Group, a research firm, only about 1% of all attic re-insulation jobs use the material. Though foam is a better insulator than fiberglass, it's also three times more expensive (although in some cases it does eliminate the need for a vapor barrier), and its composition is controversial.

Early foam insulation, made from urea formaldehyde, emitted toxic vapors during curing, and its use was discontinued in the 1980s. Replacements use less harmful petrochemicals. One of this year's IBS exhibitors, BioBased Insulation of Fayetteville, Ark. includes oils from soybeans in its mix. But some homeowners still occasionally complain about odor. Nevertheless, spray foam is expected to become more popular as more consumers demand greater energy efficiency in a

shaky economy, spurred on by federal tax breaks on energy-efficient construction and remodeling. Freedomia projects that use will grow 2.8% annually through 2013.

**Solar shingles:** Introduced in 2005, solar shingles were meant to be a more aesthetic, less weighty alternative to solar panels. Integrated into a square of regular asphalt shingles, rather than floating on top of the roof like a panel, the shingles were much easier to replace than traditional panels. But they were also far less efficient, and able to convert 10% of the sun's energy to power. So a homeowner would need more than a decade to recoup his initial investment, limiting the product's appeal.



*LUMA Resources*

Solar shingles from LUMA Resources

However, technology is rapidly improving. The latest generation of solar shingles, such as the 60-shingle kit produced by IBS exhibitor Luma Resources, uses multicrystalline cells that produce more power and can be installed in less time than earlier versions, which could make them more popular. Dow Chemical estimates that its new thin-film solar shingle, which will roll out on a limited basis by mid-year, will generate \$5 billion in revenue by 2015.

**Insulated Concrete Forms:** ICFs were introduced about 20 years ago, and almost always get attention at trade shows. (This year, they were used for the [New American Home](#), which could only be visited virtually because the builder couldn't obtain financing to finish it.) The technique is simple—stack thick blocks of Styrofoam forms Lego-style, and fill the cavities with rebar and concrete. The system creates walls with R-25 insulation; siding is applied directly to the exterior, and the need for framing is eliminated.

The solid walls can withstand the winds from hurricanes and even tornadoes. But according to the Insulating Concrete Form Association, it costs between \$1 and \$4 per square foot more to build with ICFs compared to regular wood-frame homes. So ICFs are usually found in custom rather than production homes. New technology is boosting the walls' energy efficiency without adding thickness—form-maker Logix, for instance, is using BASF's Neopor, a material embedded with graphite, which cuts down the transfer of heat and cold. Still ICF Builder magazine estimates that residential use of ICFs dropped 25% in 2009 from a year earlier, and predicts growth will be flat this year.

**Structural Insulated Panels:** SIPs are another alternative wall system—they're essentially an insulation sandwich, a filling of foam or a material like wheat straw with two layers of sheet

metal or oriented strand-board as the bread. They're strong enough to replace studs and joists, and they create supertight, energy-efficient buildings without other insulation and vapor barriers. Although they've been around since the 1930s, they still have only a little more than 1% of market share, largely because builders are hesitant to adopt technology that would require a radical retraining subcontractors and redrawing designs, according to Bill Wachler, executive director of the Structural Insulated Panel Association, which has a booth at IBS. But, he says, tighter energy standards now being considered in Congress may force builders to reconsider them.

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