

SOLATUBE – April 2010

Back when the cavemen moved from one shelter to another, an important factor must have been whether the sun could provide more natural light in their new home than their previous dwelling. After all, you can't appreciate cave art in the dark!

Today, daylighting is once again enjoying its day in the sun as an important factor in home design. The U.S. Green Building Council's (USGBC) official REGREEN standard, a new set of environmental guidelines for homeowners, recommends adding more natural light to make homes more energy efficient, while new technical innovations in daylighting can provide homeowners with more consistent, more comfortable level of light throughout the day.

Each year, 10 percent of a typical single family home's energy bill is spent on lighting, and an additional 49 percent is spent on heating and cooling costs. When daylighting applications are properly applied, homeowners can greatly decrease the amount of energy used within their homes.

More than just solar tubes, Tubular Daylighting Devices (TDDs), such as the Solatube Daylighting System (<http://www.solatube.com/residential>), bring consistent light to dark spaces without heat gain or loss. Today's tubular daylighting devices can be professionally installed in under two hours for about the same cost as adding a recessed lighting can.

Using advanced optics, Solatube Daylighting Systems deliver natural light into the home through technology found in the system's three zones: the capture zone on the roof, the transfer zone through the attic, and the delivery zone into the room.

On the roof, the daylight-capturing dome lens redirects low-angle morning and dusk sunlight while rejecting overpowering summer midday sunlight. As a result, the right level of light is routed into the tube and down into the home throughout the day.

Solatube's patented Spectralight Infinity Tubing is the most reflective material found in TDDs today, with 99.7% specular reflectivity that enables the purest color rendition possible. This tubing material reflects the sunlight without transmitting the solar heat, and allows Solatube Daylighting Systems to be installed more than 30 feet below the rooftop with virtually no light loss.

At the delivery zone in the home, two lenses customize the incoming daylight to match the room's design needs and the homeowner's personal preferences. Effect lenses can change the light color from natural to warm, while diffuser lenses vary how widely the light is spread. Add-on kits can artificially dim the amount of daylight shone into a room – useful for home theater spaces – or can incorporate an energy-efficient compact fluorescent light bulb (CFL) for a combined day-night light fixture.

There has never been a better time to add daylighting to your home, thanks to last year's "Stimulus Bill" (The American Recovery Act of 2009). By installing Solatube eChoice Daylighting Systems, homeowners may receive a tax credit of 30% of the product cost of each system, up to \$1,500. The Solatube 160 DSe (10-inch Daylighting System) and the Solatube 290 DSe (14-inch Daylighting System) are both eligible for the tax credit when installed in a primary residence. More information on qualifying products is available at http://www.energystar.gov/index.cfm?c=tax_credits.tx_index.

For more information on daylighting and on Solatube Daylighting Systems, please visit <http://www.ilovedaylight.com>.