Breen & Associates, LLC
Professional Home Inspection Services
SERVICE WITH INTEGRITY - WHEN YOU NEED IT!

Serving The Entire Black Hills Region

Phone: 605-391-1608

info@BreenandAssosiates.com
www.BreenandAssociates.com

Owner: Patrick@BreenandAssociates.com

The Future of Home Lighting

By: Patrick Breen

Earth Day, April 22nd, is what many consider to be the birth of the modern day environmental movement. Beginning in 1970 this emerging consciousness towards protecting the world's resources has slowly been coupled with the economic factors of ever increasing energy costs. Together those market driven factors along with increased 'Green' awareness has forever changed the landscape of the contemporary home.

These changes can be seen in the increased use of 'Smart Meters' that help regulate electric energy usage, home appliances that are 'Star' rated for their efficiency, and a greater attention toward general building construction practices that focus on a tighter structural seal and higher insulating R-Values.

The one dimension of our home that is poised for change, and has yet to come into full force, is the means and methods of which we illuminate our spaces. In the U.S. lights consume over 20% of all the energy used. In 2007 Congress passed The Energy Independence and Security Act (EISA) and since that time has debated its implementation. Most notably involving the issue of banning the 100-watt incandescent light bulb.

To help steer this evolution out of government and into the marketplace Congress initiated the L Prize contest in 2007. The 10 million dollar prize was geared to launch research for replacing the standard energy-wasting incandescent 60-watt bulb. Phillips won the prize and introduced into market this April their new LED (Light Emitting Diode) bulb.

Two technologies are leading us into the future of home and office illumination: The LED and the compact florescent lightbulb (CFL). The florescent light has been with us for some time and is relatively inexpensive, but has some environmental drawbacks - most notably the fact that the gas inside the bulb contains mercury. When broken this can pose a minor health risk. The size of this tubular bulb coupled with these and other health concerns has relegated CFL to a back seat over newer LED technologies.

LED lights have been around since 1963, but prior to 1993 clear light could only be produced from having three separate bulbs – red, green and blue. Since that time the industry has worked to produce the pleasing type of light we enjoy from the familiar warm incandescent light, but at a much lower energy usage. To put this in perspective a 60-watt incandescent and an equivalent LCD running for the same time over 6 years would cost $180 vs. $37 respectively.

This all sounds good until you go to buy the bulb. The new Phillips prize-winning LED retails for $60. Even with utility rebates the consumer will spent at a minimum of $20 per bulb. Even though the life expectancy is 30,000 hours (20 years at 4 hours per day) it's a hurdle difficult for most to jump. But, as with all new technologies competition and refined production costs will substantially lower this over time. Let's just hope it's sooner rather than later because in 2014 incandescent bulbs higher than 40-watts will be banned.