CLEAN AIR COOL PLANET

FACT SHEET

Fluorescent Light Bulbs

Lighting accounts for 20% to 25% of all electricity consumed in the United States. An average household dedicates 5% to 10% of its energy budget to lighting; the average commercial establishment, 20% to 30%. In a typical residential or commercial lighting installation, 50% or more of the energy is wasted by obsolete equipment, inadequate maintenance, or inefficient use.

- Compact and sub-compact fluorescent light bulbs operate using only one fourth as much energy as a standard incandescent bulb.
- Fluorescent bulbs also give off 90% less heat than "normal" bulbs.
- While most incandescent bulbs have an average lifetime of 750 to 1,000 hours, fluorescent bulbs generally have rated lives of 8,000 to 12,000 hours—the difference between replacing the bulb once, or ten times, over a given period.
- Most fluorescent bulbs come with at least a one-year unconditional warranty.

Technical details include the following:

- **Wattage equivalents**: Because fluorescents need less wattage to create the same amount of light, there is not a one-on-one correlation when replacing an incandescent bulb with a fluorescent one. In *general, a one-to-four ratio exists, so an approximately 15-watt fluorescent bulb would be used to replace a 60-watt incandescent; a 25-watt fluorescent* would substitute for a 100-watt incandescent; and so on.
- **Shapes/Styles**: The newest "generation" of fluorescent lights—sub-compact fluorescents—have the distinct advantage of being small and standardized enough to fit into most light fixtures and lamps. Many of these are shaped very much like the standard "A-line" incandescent, or are spiral. Of regular compact fluorescents, there is a much wider variety (see attached "cut the light bill" illustrations). Some of these also require specific light fixtures or ballasts for use. These fixtures also span a wide range of style and of energy efficiency ratings.
- **Color rendering**: Fluorescents used to be associated with harsh, glaring, uncomfortable light, but improvements in the technology have created fluorescent light choices that are of quality as good or better

than incandescent bulbs. The type of light given off depends on the temperature rating of the bulb—high temps (3500-5500 degrees Kelvin) produce cooler light (more blue or white tones); lower temps (2000-3500 degrees Kelvin) produce warmer light (more yellow tones). All fluorescent bulbs are rated from 1-100 on a Color Rendering Index (100 would be the equivalent of sunlight, so the higher the better) and most fall in the 80-84 range.

Traditional obstacles to choosing fluorescent bulbs are becoming less relevant:

- **Lack of consumer awareness or education** about the benefits of fluorescent bulbs continues to be the biggest barrier to widespread compact fluorescent bulb use.
- **Higher initial cost**—Costs for residential fluorescent lighting range from about $6 for a 12-watt subcompact spiral bulb to about $60 for a three-way, high wattage circular bulb. When installed in a high-use fixture (one on for more than four hours a day), it is easy to recoup this higher initial cost in energy savings before the end of the first year.
- **Lack of standardization** can make choosing a compact fluorescent seem complicated or intimidating. The introduction of sub-CFLs has gone a long way toward eliminating this problem, however, since they are versatile enough to be used in most lights, indoor and out.
- **Disposal**—Most fluorescent bulbs contain mercury, a hazardous material with special rules for disposal. But the new sub-CFLs contain such a small amount of mercury that the EPA has stated it is safe to dispose of them normally.

***Manufacturers of Energy Star rated bulbs*:**

*AM Conservation Group Inc.	*Globe Electric	*Sunion
*American Lighting	*Greenlite	*Sunrise Lighting
*Bicad	*JKRL USA	*Technical Consumer Products
*Commercial Electric	*Lights of America	*Tospo
*Corso Ltd.	*Lightwiz	*Twin Growth Electronics Co.
*Feit Electric	*MaxLite	*US Par Enterprises
*General Electric	*Panasonic	*Westinghouse
*Fujian Joinluck Electronic Enterprise	*Philips Lighting Company	*Sunpark Electronics Corporation

** Osram/Sylvania—manufactures 15, 20, and 23-watt compact fluorescent (“Soft White Dulux EL”) designed to fit most standard fixtures; they also offer smaller 13 and 17-watt sub-CFLs. Shaw’s could run a

successful promotion marketing these bulbs alongside their incandescent 60 and 75-watt bulbs, inviting consumers to comparison shop.

Purchasing of CFLs can be done through the following outlets:

- **Traditional retailers**—Big and mid-sized national chains like Home Depot, Walmart, K-Mart, True Value, and others carry an increasingly large selection of compact and sub-compact fluorescents. Local hardware or convenience stores may also carry a small selection.
- **Online retailers**
  - www.cutthelightbill.com (various sizes, shapes, wattages of cfls)
  - www.energysavinglightbulbs.com (strictly sub-cfl's, free shipping)
  - www.energyguide.com/gear/bulbs.asp (various shapes, sizes, wattages)
  - www.nolico.com (variety of bulbs, free shipping on volume buys)
  - www.efi.org (variety of bulbs)
- **Utility product catalogs**
  - Northeast Utilities puts out a catalogue which its customers can request called "SmartLiving," full of energy-saving products; it can also be accessed on the Web at www.online.psnh.com/smartliving/

Promoters include the following:

- **Government agencies** like the EPA and DOE, who now feature CFLs prominently in their websites and literature about energy efficiency and global warming solutions. The DOE has also worked in partnership with some manufacturers (Light of America, Sunpark, JKRL USA, and Surya/PMI) to bring sub-CFLs into greater demand by offering substantial volume discounts to retailers.
- **Major retailers** like Home Depot, Wal-Mart and Aubochon Hardware, who participated in last October's "Change a Light, Change the World" campaign coordinated by the Energy Star program (US EPA). These and other retailers have often partnered with local **utility companies** or with municipally-sponsored energy efficiency initiatives to educate consumers about the benefits of CFLs, in locales from Massachusetts to Washington state.
- **Environmental groups** like us.