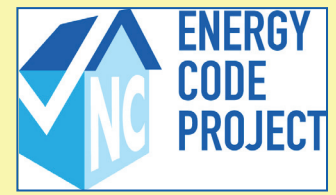


# High-Efficacy Lighting Guide

## North Carolina Residential Energy Code 2012



### Requirements




- High-efficacy lamps are defined as: 60 lumens/W for lamps over 40W; 50 lumens/W for lamps over 15W to 40W; 40 lumens/W for lamps 15W or less.
- High-efficacy lighting includes CFL, LED and fluorescent bulbs.

**NC Code requires:**  
A minimum of 75% of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps.

### Benefits

- CFLs and LEDs use 75-90% less energy than incandescent lamps and can last 10-25 times longer.
- Their longer life makes them a perfect choice to use in high ceilings and other hard-to reach spots.
- The recent DOE-supported field study revealed that high-efficacy lighting could save NC homeowners more than \$900,000 in one year.

### High-Efficacy Lighting Compared to Incandescent

			
Characteristic	Incandescent	CFL	LED
Watts	60W	13W	7W
Lumens	800-900	800-900	800-900
Estimated Life	1,200 hrs	9,000 hrs	25,000-50,000 hrs
kWh/yr used	88	19	10
Cost/yr	\$9.64	\$2.09	\$1.12

*Energy and cost based on use of 4 hrs. per day, 365 days per year.*

### Shedding Some Light on Common Myths

- LED and CFL bulbs are dimmable. However, in order to use a CFL or LED in a dimming fixture, you must use a bulb that was designed (and labeled) as dimmable.
- Some CFL bulbs can take 30 seconds or more to reach full brightness. However, LED bulbs reach full brightness instantly or look for CFL bulbs labeled as "instant on".
- LED and CFL bulbs do need to be recycled.
- CFL bulbs are sensitive to the environment. When bulbs are used in a humid environment, they should be encased in a fixture, or just use an LED bulb in these situations.
- CFL and LED bulbs are readily available in a variety of shapes, sizes, colors, and brightness.
- The price of CFL and LED bulbs have come way down.