

# Duke Energy Progress – Residential New Construction Program

## Technical Bulletin

### Efficient Lighting: The most cost effective way to increase savings and rebates

What counts as efficient lighting?

- CFLs
- LEDs
- Fluorescent tubes
- **Does not count:** Incandescent bulbs labeled “Energy Saving” or “Halogen”

How is the efficient lighting percentage calculated?

- Per fixture, not per bulb
  - Chandelier with several bulbs = 1 fixture
  - Ceiling mount dome light with two bulbs = 1 fixture
  - Each can/recessed light = 1 fixture
- Only consider lighting in RESNET-defined qualifying light fixture locations
  - Includes bedrooms, hallways, stairways, and garages.
  - Does not include closets, unfinished basements, or plug-in lamps.

The RNC Program compares the efficient lighting percentage of the finished home with the base NC Energy Code, which requires at least 75% efficient lighting. Builders earn larger rebates by installing more CFLs and LEDs than required by NC Code. Builders lose rebate money by installing less than 75% efficient lighting.

Consider the table below that shows how efficient lighting affects the rebate for an actual 3,100 sf, 4 bedroom home. This home had 55 total light fixtures, including 9 can lights and 2 decorative multi-bulb fixtures. In Scenario 1, the electrician forgot to install any efficient lights in the home. In Scenario 2, CFLs were used everywhere except in can lights and in chandeliers. In Scenario 3 the only non-efficient fixtures left in the home are the chandeliers.

Scenario	Interior Efficient Lighting	Above-Code Electric Savings per Year (kWh)	Improvement from NC Code	Impact on Rebate
1	0%	-1,433.3	-84.1%	-\$1,289.97
2	80%	95.5	5.6%	\$85.95
3	96%	401.3	23.6%	\$361.17

The cost of installing efficient lights is now far less than the total rebate available for doing so. Installing efficient bulbs in the 9 can lights described in the example above increased the rebate by about \$275. That’s enough to easily offset the cost of CFL or even LED bulbs with plenty of rebate left over.

