

# Energy Conservation Tips

Power the Force. Fuel the Fight.



*Dollars for the Mission...Not Utilities*

## Lighting Information



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### Turn Off Lights To Save Energy and Money:

**FACT:** Lighting accounts for around 20 percent of the electricity consumed in the United States. Turning lights off when they are not needed is a low cost technique that reduces energy consumption, saves money, and avoids the environmental impacts of producing the electricity that would otherwise be consumed.

**QUESTION:** Is it better to leave lights on while you are out for short periods of time? Isn't the life of the light shortened every time it is tuned on and off?

**ANSWER:** All types of lights have a nominal or rated operating life — the total number of hours that they provide a specified level or amount of light. The operating life of all light bulbs is affected by the number of times they are turned on and off, however, the exact number of hours switching lights on and off affects the total operating life depends on the type of light and how many times it is switched on and off, and the price of electricity. Some basic rules are as follows:

**Incandescent lights** should be turned off whenever they are not needed. Nearly all types of incandescent light bulbs are fairly inexpensive to produce and are relatively inefficient. Only about 10 to 15 percent of the electricity that results in light - the rest is turned into heat. So turning lights off will keep a room cool-

er, an extra benefit in the summer. Therefore, the value of the energy saved by not having them on will be far greater than the cost of having to replace the bulb.

**Fluorescent lights**, if you leave a room for more than 5 minutes, it is probably more cost effective to turn them off. Fluorescent lights are more expensive to buy, and their operating life is more affected by the number of times they are switched on and off, relative to incandescent lights. Therefore, it is a cost trade-off between saving energy and money by turning a light off "frequently" and having to replace the bulbs "more" frequently.

**QUESTION:** I thought fluorescent lights use a lot of energy to get started, and thus it is better not to turn them off for short periods. Is this true?

**ANSWER:** There is an increase in power demand when a light is switched on called an "in rush". The exact amount of this depends on the type of ballast and lamp. However, the amount of electricity consumed to supply the inrush current is equal to a few seconds or less of normal light operation. So turning off fluorescent lights for more than 5 seconds will save more energy than will be consumed in turning them back on again.