

Residential Lighting: Use and Potential Savings

Linda Owens, U.S. Energy Information Administration

This poster presents highlights from the Energy Information Administration's 1996 report, "Residential Lighting: Use and Potential Savings." For US residential households, this display presents the number of indoor lights, the amount of electricity used for lighting, annual expenditures on electricity for lighting, and the potential energy savings that would result from replacing incandescent lights with compact fluorescent lights.

In 1993, there were 96.6 million US households that have an average of 5.4 indoor lights on for one or more hours per day – a total of 523 million lights. They used 940 kWh of electricity for lighting and spent about 83 dollars on that electricity. The total amount of electricity used for lighting by all US households was 90.1 billion kWh, accounting for about 9% of all residential electricity consumption.

Only 8.6% of US households use compact fluorescent lights. If US households replaced all incandescent lights used four or more hours per day with compact fluorescent lights, they could save a total of 31.7 billion kWh annually, or 35% of all electricity used for lighting. Depending on the price of electricity, the hours of use per day, and the wattage of the bulbs, the amount of time it takes before a household sees a savings from compact fluorescent lights varies, with high price associated with shorter payback periods. The poster presents these payback periods based on electricity prices of 5, 10, and 15 cents per kWh.

For a copy of the full report, call the National Energy Information Center at (202) 586-8800 or e-mail them at infoctr@eia.gov. To see a copy of the report on the EIA Home Page, go to <http://www.eia.doe.gov/-emeu/recs/recs4a.html>.