

## Save Money on Your Lights

by

James R. Ross

Robert H. Turner, PhD, P.E.

Desert Research Institute, Reno, NV

There is a simple way for homeowners and others to reduce electric bills. Change out frequently used light bulbs! Compact Fluorescent Light (CFL) bulbs use a fraction of the electric power to generate the same illumination as an incandescent light bulb, so they cost less to operate. And since they consume less power, they also produce less space heating. CFL light bulbs are rated to last 10,000 hours (that's 4 hours every day for 7 years), which is much longer than incandescent bulbs.

Now \$5 for a light bulb may sound high, but the electricity saving will quickly pay back the initial expense. For example, consider replacing a 100-watt filament light bulb with a 23-watt CFL, both of which produce similar illumination. The CFL costs around \$4.85, and the cost of electricity is around \$0.13/kW-hr (in Reno in 2009). If the light is burned 4 hours/day, then the graph below shows that the simple payback period is around 4 months and by the end of the first year the saving is over \$10! Over the 7 year life of the CFL the saving is just over \$100!

