

energy use reduction [lighting]

Light Emitting Diodes (LEDs)	Incandescent Light Bulbs	Compact Fluorescents (CFLs)
50,000 hours	1,200 hours	8,000 hours
9-18 watts	60 watts	13-15 watts
329 KWh/yr.	3285 KWh/yr.	767 KWh/yr.
\$32.85/year	\$328.59/year	\$76.65/year

The Parkland Net-Zero house achieved significant energy savings through lighting selection.

The Bulbs

CFL (Compact Fluorescent Lights) and LED (Light Emitting Diode) lights use less electricity for lighting than their incandescent or halogen counterparts. In addition, CFL's and LED's last longer and produce less waste heat than incandescent bulbs.

The Mix

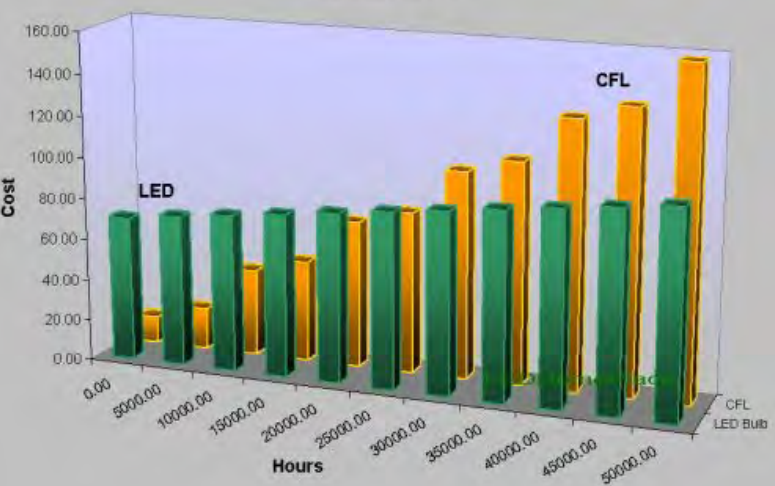
The cost of LED light bulbs is still high relative to the CFL's so we decided to use a mix of the two rather than breaking the bank and going straight LED. We felt that this would provide a good balance between energy conservation and overall cost if implemented correctly.



We used six LED GU10 bulbs in all of the occupied bedrooms for a combined wattage of 36W—less than the equivalent of one standard GU10 bulb. We also used LED's in the areas that would be lit for travel around the house as in the hallways, niche lights and accent lights. In the kitchen and master bedroom we installed LED rope light in a recessed valence to add a great ambiance and feel to the spaces. In all other areas of the home CFL's were used.

We left standard GU10 bulbs in the guest bedroom to show visitors the feel and difference of the LED's in direct comparison.

Cost LED Vs CFL



Sweet Daylight

What better way to reduce electricity than disciplined conservation? The home has been designed with ample daylighting such that the lights do not need to be turned on during the day in almost every room. It's free and it's sexy.

Task Lights

Throughout the home you will find limited focused lighting in areas where tasks are to be performed rather than lighting the whole room. Above desks, workstations and the kitchen sink are just a few spots you will find LED pot lights.