

How Much Carbon & Cost Does a Light Bulb Change?

Cooling our planet will take changes in everything from public policies to light bulbs.

Incandescent bulbs have been banned because they waste so much power. “Swirly” compact fluorescent lamps (CFL) have been replaced by yet more efficient LED (light-emitting diodes) bulbs.



Unless you're operating on solar power, Louisville light bulbs are powered by coal- or natural-gas-fired power plants—whose emissions harm health and contain global warming, greenhouse gases (GHG).

You could wait until older type bulbs fail, but it's smart to replace incandescent bulbs now. Here's how to calculate how much money and carbon pollution you'd save:

1. Make a list of the incandescent bulbs you're still using. Note their wattage or, better, light output in lumens, and whether you'd prefer any to be brighter?
2. Visit a hardware, home goods or home-improvement store. Find LED bulbs rated for the equivalent wattage or similar (or higher, if desired) lumens.

Tip: Choose between “warm white,” “cool white” and “daylight.” For the best look, avoid mixing light colors in the same room. Daylight is best for workspaces, because it perks up our brains.

3. Complete the table on the back of this sheet, referring to the example, to compute your savings, in dollars saved and GHG emissions prevented.

For CFL versus LED bulbs, choose on the basis of comparable output lumens, not equivalent wattages.

Converting from a 100-W incandescent to an 18-W LED saves \$15.71 and 300# of GHG emissions every year! Multiply it by each bulb you replace, and it adds up! Learn more at <https://www.louisvillecan.org/lighting>.

Please dispose of old, mercury-containing fluorescent bulbs safely. Learn where: <https://louisvilleky.gov/government/public-works/services/hazardous-materials-disposal-haz-bin>



Louisville Climate Action Network

How Much Carbon & Cost Does a Light Bulb Change?

Using the instructions on the front of this hand-out, you can compute your savings—in dollars and reduced greenhouse gases—from changing your old light bulbs to LED replacements.

		(Old - New)	(reduced wattage)÷1000)		kW x (hrs/day) x 365	kWh/yr x \$0.10 *	kWh/yr x 2#
Old Wattage	New Wattage	Reduced Wattage	Reduced Kilowatts (kW)	Hrs/day used	Kilowatt-hours (kWh)/year	\$/year saved	# GHG reduced
100	18	82	0.082	5	$0.082 \times 5 \times 365 = 149.7$	$150 \times \$0.10 = \15.71	$150 \times 2\# = 299\#$

Tip: If computing the savings from changing several bulbs, save time by a) completing the first three columns, b) totaling the entries in the **Wattage Reduction** column and c) doing the rest of the calculations on that sum.

* For commercial-class utility customers, use the higher, commercial rate of \$0.12 per kilowatt-hour of electricity.

**I can, you can,
Louisville CAN!**

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