

Making the digital switch

Upgrade your lights from “analog” to digital with LED bulbs.



Photo by Geoffrey A Landis

Just as you upgraded your TV/cable and phone from an analog system to digital for better sound and picture quality, the lighting industry has been modernizing its options and products in order to offer consumers greater energy efficiency. For the past several years, traditional incandescent bulbs have been phased out in favor of halogen and compact fluorescent (CFL) lights that offer greater efficiency. Even more recent innovations in technology have focused on Light Emitting Diode light sources, or LED bulbs, which are essentially digital light.

Longevity and efficiency in one

Known for their longevity and efficiency, LED lights have an estimated operational life span of up to 50,000 hours. This equates to 17 years of continuous operation, or 34 years of 50 percent operation. So if you were to use an LED fixture for eight hours per day, it would

take approximately 17 years before it would need to be replaced.

LED lights are different from fluorescent and incandescent light sources, as LEDs do not contain a gas or filament of any kind. Instead, the entire LED is made up of a semiconductor, which is solid in nature and makes LEDs more durable. LED lights are small, packed electronic chip devices where two conductive materials are placed together on a chip (a diode). Electricity passes through the diode, releasing energy in the form of light. Unlike fluorescent lights that require a few minutes to warm up before reaching their full level of brightness, LEDs achieve full illumination immediately.

The cost of “analog” lights

If you are still hanging on to your traditional or “analog” era lighting, your light bulb is operating at only 20 percent energy efficiency. Eighty percent of the

electricity from the “analog” bulb is lost as heat. To illustrate how this inefficiency impacts your wallet, consider this. If you have traditional lighting and your electric bill is \$100, then you are spending \$80 to heat the room instead of light it. Using LED illumination with 80 percent efficiency, your electricity cost would be approximately \$20, saving you about \$80.

Ideal for outdoor use

LEDs are ideal for outdoor use because of their durability. LED lights are resistant to vibrations, shock and external impacts such as exposure to weather, wind and rain. In addition, they are temperature resistant and operate in colder outdoor temperatures. In contrast, colder temperatures may affect operation of fluorescent lamps. LEDs can also be dimmed, allowing maximum flexibility in usage.

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Smart choice for emergency use

If you have a portable generator or battery-back-up, in the event of a power outage or weather emergency, LED lights are a smart complement to your back-up power system. Because they draw so little power, using LED lights instead of CFL or traditional bulbs will allow you to illuminate more areas or channel the “saved” energy to other needed applications.

Don't be fooled

When purchasing an LED light, look for the Energy Star label to ensure you have a genuine product, as there are poor quality LED products in the marketplace. Some of these products are manufactured outside of the U.S. with components that produce low light levels, don't stand up on long service life, or have exaggerated energy saving claims. So like any other purchase, research before you buy! Visit energystar.gov for more information about Energy Star LED lights.

While it is true that LEDs generally cost more to purchase than fluorescent and incandescent lights, they are much less expensive to operate over time. LEDs are energy efficient so the replacement and maintenance requirements are dramatically lower. In addition, as with other electronics, prices are expected to come down as more products enter the market. Make the switch from analog to digital, and you will see an increase in your home energy efficiency and a decrease in your energy costs.

Making the digital upgrade

Are you interested in learning more about LEDs and how they can fit with your home and lifestyle? Visit <http://energy.gov/energysaver/articles/lighting-choices-save-you-money> to compare LEDs to new energy-efficient incandescent bulbs and CFLs.

Rebates available from EnerStar

So now that you know about the money you will save using LEDs, read the accompanying story about lighting rebates available that EnerStar Electric Cooperative offers!

Cash back when you buy ENERGY STAR® CFLs and LEDs.

There are lots of reasons to make the switch to compact fluorescent light (CFL) bulbs or LED light bulbs for your home or business—like the \$40 to \$135 just one bulb saves in energy costs over its lifetime. In fact, if every home in the United States switched out just one incandescent bulb for an ENERGY STAR® CFL or LED light bulb, the energy savings would cover the cost of lighting three million homes for a year, or about \$600 million in annual electricity costs.

We've had a long love affair with CFL bulbs, but if you've never felt the same way, you'll be happy to note we're now offering rebates for LED light bulbs—and that these bulbs, while more expensive than CFLs, earn a bigger rebate, do better in cold weather, and don't need to

warm up like CFLs do.





EnerStar Electric Cooperative, in conjunction with our wholesale power supplier, is pleased to offer two lighting rebates to our members. **Members can get \$1.50 for each ENERGY STAR® CFL light bulb you buy, whether that's a standard,**

three-way, dimmable, or can/reflector bulb. Better yet, for each ENERGY STAR® LED light bulb you buy, of any type, members can earn a \$7.50 rebate.

In other words, you can light your home or business without lightening your

wallet. Some restrictions apply so hang onto your receipts and visit www.powermoves.com to download the lighting application, and we will send you a check in return!

Bright Lights. BIG SAVINGS.
You can buy ENERGY STAR® CFL or LED light bulbs for just about any lamp, at any store where home goods are sold. They do cost a little more up front, but between their long lives, the energy savings they bring, and rebates available through EnerStar, CFLs and LEDs let you recoup your money in months.

LED Lifetime Characteristics				
Compare and contrast the lifespan and power consumption for the available light bulb options.				
*Source: energystar.gov				
				
	Incandescent	LED	CFL	Halogen
Lifespan (hours)	750-2,000	35,000-50,000	8,000-10,000	3,000-4,000
Power Consumption	100 W 75 W 60 W 40 W	16-20 W 9-13 W 12 W 8-9 W	23-26 W 18-20 W 13-15 W 10-11 W	75-72 W 53 W 43 W 28-29 W

The Breakdown: Which items use the most electricity in your home

Borrow EnerStar's Energy Use Monitor

That black box on top of your television in your living room? The one that plays basketball or movies and seems to be running constantly—even when there's no one in the room? It's hardly the biggest electricity draw within your home. Neither—and this is more likely to surprise you—is the clothes washer or dryer.

By a wide margin, the biggest energy draw in your home is an electric water heater. For a family of two, the typical water heater costs more than \$200 to run for a year. The next-biggest draw, an electric clothes dryer, averages \$96 per year.

We know we talk a lot about saving electricity, and we also know that many of our members wonder exactly where their electricity dollars go each month. The accompanying chart gives you some idea where you can get the most savings month after month.

Monitor Your Usage

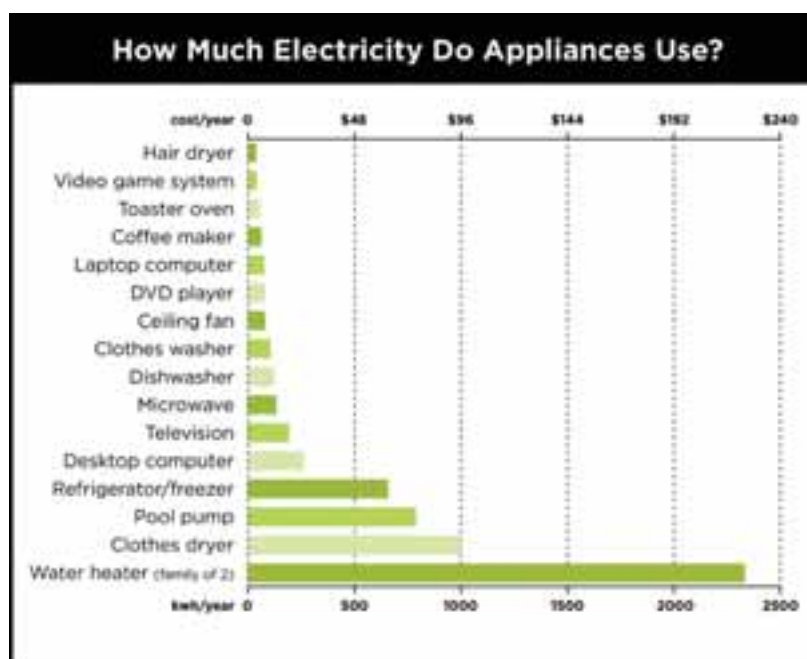
But if you're especially curious about your electric consumption, you might look into an electricity usage monitor. This \$25-\$50 device attaches to any 120-volt outlet so

that you can see exactly how many watts whatever you're plugging in is using.

Better yet, EnerStar has two units that our members can borrow for a week or so. Just stop by the office during our normal business hours of Monday through Friday, 7:30 am to 4:30 pm. We will show you how to use it to determine how much power your appliances and electrical devices use. Once you

understand this, you can take steps to reduce your energy consumption—after all, it is difficult to manage what you cannot measure.

Small steps can add up to big savings and your electric cooperative is here to help you. If you need more information about your energy consumptions, contact EnerStar's Tim Haddix at 80-635-4145, extension 117 or via email at thaddix@enerstar.com.



Become an Air Evac Lifeteam Member through EnerStar Electric Cooperative

EnerStar and AirEvac Lifeteam have partnered to offer our residential members the opportunity to join the Air Evac Lifeteam Membership program through an affordable billing plan. Members have the option to choose the convenience of paying a monthly fee or an annual fee. Each plan is offered at a discounted rate through your Cooperative.

Option 1: A monthly fee is \$5.00 per month per household which can be billed on your monthly EnerStar statement.

Option 2: AirEvac also offers annual and multi-year payment options. The fees for the entire household are as follows:

- Platinum (25 Year) Membership - \$1,125
- 10-Year Membership - \$550
- 5-Year Membership - \$275
- 3-Year Membership - \$165
- 1-Year Membership - \$55



Join Air-Evac Lifeteam through your Cooperative today and choose which option best suits your needs.



Now is a great time to sign up for budget billing

Members wanting to eliminate the fluctuations of their monthly electric bills are encouraged to sign up for EnerStar's Budget Billing program!

Accounts with at least 12 months of consumption history and with account balances paid in full are eligible.

- Monthly budget bills are reevaluated in April, August and December based on the account's consumption history. If necessary, the monthly amount will be adjusted accordingly.

- There is no "catch up" month. When reevaluating the account, any under-collected amounts and overpaid amounts are "rolled over" into the next 12 months.
- Monthly budget bills must be paid before the disconnect date. If payment is not received, the account will be removed from the budget plan.
- If an account is removed from budget billing for any reason,

any balance on the account is due immediately.

- Budget Billing is automatically renewed, unless terminated by either the member or the cooperative.

Think you might be interested in EnerStar's Budget Billing program? If so contact a Member Accounts Representative at 1-800-635-4145 or via email at billing@enerstar.com.