IDAHO POWER®

Fall Energy Efficiency Guide

GOOD ENERGY

INSIDE:

- Weatherize Your Home for Winter Comfort and Maximum Savings
- Light Your Home — Love Your Light
- Tax Credits and Incentives for Energy Efficiency Upgrades

idahopower.com/save

Billie McWinn, Energy Efficiency Program Leader

We know everyone is facing higher than usual bills — gas, groceries, housing — everywhere you look. Many of you contact Idaho Power with questions about your bills and how you can reduce your home's energy use. I invite you to use this guide and the tools on our website to help you decide where to focus your time and money for the biggest energy savings.

If you're unsure how your home uses energy, I have two suggestions:

1. **Register for My Account** at **idahopower.com**, and check out your hourly energy use. You'll also be able to complete a short home profile to generate custom tips showing how you can save.
2. **Consider signing up for a home energy audit** to get a comprehensive look at how you use energy in your home. When conducted by a qualified home-performance specialist, specialized equipment and tests provide information about your insulation, air sealing and HVAC system needs. Idaho Power offers professional in-home audits for a discounted rate — complete with a comprehensive report of energy efficiency recommendations and some instant energy-saving items. Learn more at **idahopower.com/homeenergyaudit**.

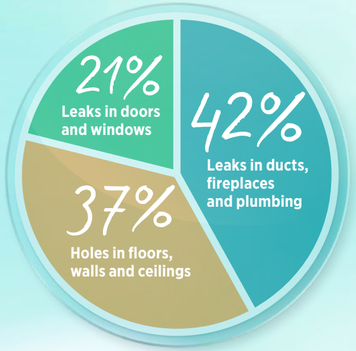
If you choose to make energy efficiency improvements to your home, you'll want to take advantage of all the cash incentives and tax credits currently available. The back cover of this guide contains a summary and list of resources.

– Billie

Weatherize Your Home for Winter Comfort and Maximum Savings

With cooler weather upon us, your home may begin to feel drafty. Finding and plugging air leaks in a typical home can save up to 10% on heating bills during the heating season.

Where does cold air come from?



Source: U.S. Department of Energy (DOE)
energysavers.gov

The source of the draft dictates the fix. The good news is that low-cost, do-it-yourself caulking and weather stripping of leaky doors, windows and exterior plumbing fixtures will plug many air leaks. Low- and moderate-income families with electrically heated homes may also participate in Idaho Power's Weatherization programs. See if you qualify at **idahopower.com/weatherization**.

Seal duct work

Because heated air often leaks from ducts into crawl spaces or attics, sealing duct-work is the best way to increase comfort and reduce energy waste. Use mastic or approved foil-faced tape to seal all joints and intersections. If your ducts are hard to get to, consider calling a professional. Many home-performance specialists and contractors have equipment that quickly repairs these issues.

Eliminate air leaks

If you can see daylight around a door or window frame, you've got an air leak (and an entry point for creepy crawlers). Seal openings with caulk or weather stripping and increase your energy savings and peace of mind. While you're at it, check for holes around pipes and wires that enter or exit your walls. Don't forget entrances like pull-downs, attic stair openings and light fixtures. Home-supply stores have inexpensive sealant options to choose from.

Add insulation to the attic

Because hot air rises, start at the top and work down. An energy audit can determine where insulation is needed. Idaho Power recommends a minimum attic insulation level of R-38. Colder climates and Oregon need R-49. Remember that insulation is not an air barrier, so seal air leaks before adding new insulation. Seal your ductwork before adding insulation too.

Seal off fireplaces

Fireplaces are energy losers. They draw in as much as 300 cubic feet per minute of heated air and then send it straight up the chimney. It's best to keep the flue damper tightly closed when not in use. High-efficiency fireplace inserts or wood-stoves, properly sized and installed with a flue collar, are safer and can be good sources of supplemental heat.

Other ways to save

Consider using a programmable or smart thermostat to set the temperature as low as comfort and safety allow in the cooler months. Smart thermostats have many advanced features that include internet connectivity, downloadable energy tools and access to weather data. These features provide homeowners with increased control of their home's heating and cooling energy use. And Idaho Power offers a $50 incentive for some all-electric homes. Find out if your home qualifies at **idahopower.com/save**.

Check for air drafts

Test your home for air tightness. On a cool, windy day, shut your doors and windows and turn on your exhaust fans. Hold a lit incense stick next to your windows, doors, electrical boxes, plumbing fixtures, electrical outlets, ceiling fixtures, attic hatches and other locations with a possible air path to the outside. If the smoke stream travels horizontally, you have located an air leak. Plug it with caulk, spray foam or weather stripping.

Many upgrades can result in a more comfortable home this fall and winter, but plugging air leaks is one of the cheapest and easiest home fixes that can result in real energy savings.

When you weatherize your home, you increase your comfort, save energy, reduce waste and preserve natural resources for the future.

Safety First

Only use a combustion appliance — such as a wood stove, kerosene burner or fireplace — when vented to the outside. Never use a gas range, indoor cooker, or charcoal or gas barbecue for heating indoors. And if you have any combustion heating equipment, such as a gas furnace or stove, install a carbon monoxide detector and change the batteries annually. If the alarm goes off, evacuate the building and call 911.

LED Lighting Label

If you've shopped for light bulbs lately, you know you have more choices than ever before. When considering which bulb is best for you, start by reading the Lighting Facts label on the package.

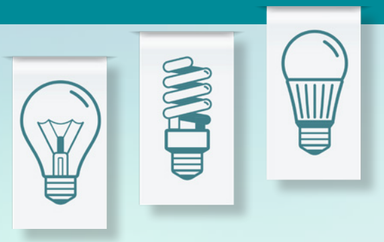
Lighting Facts Per Bulb

Brightness (A)	**810 lumens**
Estimated Yearly Energy Cost Based on 3 hrs/day, 11¢/kWh. Cost depends on rates and use.	**$1.08**
Life Based on 3 hrs/day	**22.8 years**
Light Appearance (B) Warm — Cool; 2700 K	
Energy Used (C)	**9 watts**

(A) **Lumens measure brightness.**

(B) **Light appearance is measured in degrees Kelvin (K). Lower numbers mean a warmer color.**

(C) **Watts describe power used.**



Closing a Bright Chapter

In 2007, President Bush signed the bipartisan *Energy Independence and Security Act of 2007* (EISA) into law. The goal was to promote energy efficiency across the country. EISA set a path for a steady increase in light bulb energy efficiency which boosted innovation in an industry that had been largely stagnant for more than 100 years.

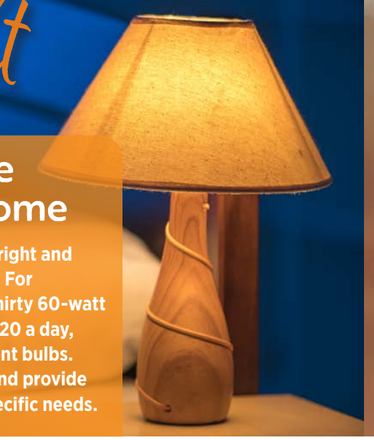
The result? Since 2010, first CFLs and then LEDs have claimed significant shares of the U.S. light bulb market. Idaho Power customers alone, through Idaho Power programs, have replaced over 18 million light bulbs, and saved enough energy to power more than 26,000 homes in Idaho Power's service area for a full year.

What now? Now that the market has transitioned and prices for the most up-to-date technology have stabilized, you'll be able to enjoy many lighting options along with savings for years to come.

Over the past 15 years, lighting options have increased while the energy impact has decreased. **Great things happen when we all work together!**

Light Your Home

Love Your Light



How to Make the Best Use of LED Lighting in Your Home

With the advent of energy-efficient LEDs , having a bright and well-lit home is safer and more economical than ever. For instance, lighting a home for eight hours a day with thirty 60-watt equivalent bulbs (800–900 lumens) costs a mere $0.20 a day, compared to the $1.52 it would cost using incandescent bulbs. That's a considerable savings! LEDs also last longer and provide more opportunities to customize lighting for your specific needs.

Here are some tips on how to make the best use of LED lighting in your home:

- **Place LEDs in areas where the light is on for long periods of time,** i.e., kitchens, living rooms, and hallways.
- **Select the right bulbs for your needs.** Consider the shape, brightness, color temperature, and color rendering index (CRI) of the bulbs.
- **Place LEDs strategically to create a well-lit space.** For example, use LED strips under cabinets to brighten your kitchen or LED accent lights to highlight a piece of art.
- **Use dimmable LEDs to give you control over the light levels in your home.** Dimmable LEDs are good for rooms where you want to create a specific mood, such as a bedroom or dining room.
- **Use LED strips and accent lights to add interest or create a focal point in your home.** They can highlight architectural features, such as crown molding or fireplace mantels.
- **Consider using smart LEDs.** Smart LEDs can be controlled with a smartphone or voice command to turn on and off the lights, adjust the brightness, or create a specific scene.
- **Clean your LEDs regularly** to prevent dust and dirt build from reducing their brightness.
- **Replace your LEDs when they start to dim.** LED lights can last for many years, but they may dim over time.

How to Choose the *Right* LED

The best color and lumen value for lighting your home depends on the specific room and your personal preferences. However, here are some general guidelines:

Room	Light Color Temperature	Benefits	Look For	
			Color (K)	Lumens
Living Room	Warm White	Creates a cozy and relaxing atmosphere. The brightness level will depend on the size of the room and how much natural light it receives.	2,700–3,000	1,500–2,000
Kitchen	Neutral White	Provides good visibility for cooking and food preparation. The brightness level will depend on the size of the kitchen and the natural light available.	3,500–4,000	2,000–3,000
Bedroom	Warm White	Creates a relaxing and restful atmosphere. The brightness level should be lower than in other rooms, as you don't want the light to be too bright and disturb your sleep.	2,700–3,000	1,000–1,500
Bathroom	Cool White	Helps to make a bathroom feel brighter and more spacious. The brightness level will depend on the size of the bathroom and how much natural light it receives.	4,000–4,500	1,500–2,000
Office	Neutral White	Provides good visibility for work. The brightness level will depend on the type of work you do and how much natural light the office receives.	3,500–4,000	2,000–3,000

It is also important to consider the CRI when choosing LEDs. The CRI is a measure of how accurately a light bulb renders colors. A high CRI (90 or higher) is desirable for rooms where you need to see colors accurately, such as kitchens and offices. Ultimately, the best way to choose the right color and lumen value for lighting your home is to experiment and see what works best for you.

Layer Your Light

Three types of lighting work together to light your home. They are ambient, task and accent lighting. Combining all three types (layering) creates a functional, beautifully lit room.

Ambient lighting refers to general lighting. Ambient light includes sunlight, overhead lighting and lamps. Using natural daylight from south-facing windows has the added bonus of providing winter warmth.

Task lighting helps you perform specific tasks. A reading lamp at a desk or pendant lamps hanging over a kitchen island are examples. Task lighting should be free of distracting glare but bright enough to prevent eyestrain. **A cool-colored bulb with a high CRI works well for aging eyes.**

Accent lighting draws attention to a particular object. As a rule, it should be brighter than the ambient light to help draw attention to the area of interest.

Did You Know?

Lighter paint colors and glossy paints reflect more light and increase brightness in a room without using energy.

Smart Bulbs and Switches

Make Saving Easy

Tired of reminding people to turn off the lights? Let technology do some of the work for you. Here are some options:

Smart Bulbs and switches are widely available and connect to your Wi-Fi so they can be managed from your smart phone.

Dimmer switches vary the light level and are easy to install. Choose dimmable LEDs compatible with your switch.

Timers can be inexpensive and programmed to keep light on for a set amount of time.

Photocells sense changes in outdoor light levels so exterior lights turn on at dusk and off at dawn. These can be particularly useful for holiday displays.

Motion sensors turn lights on instantly when motion is detected and off when it isn't. Some can gradually fade lights off.

Occupancy sensors turn lights on when someone is in the room and turn the lights off when the room is empty.

Vacancy switches require you to turn the lights on, but turn them off automatically if you forget.

Outdoor Lighting

Outdoor lighting is a great way to help make your home safe and secure, especially as nights get longer. But outdoor lights use energy and are often left on for long periods. To stay safe and save energy, assess your lighting needs, limit the hours your lights are on and choose ENERGY STAR® bulbs.

Assess Your Lighting Needs

- Trim trees and shrubs to get rid of hiding places and reduce the need for extra lights.
- Evaluate dark areas around your home, garage or yard to decide where lights are needed.
- Select DarkSky approved neighbor-friendly lights. These direct light down where it is needed without lighting up the sky or shining in your neighbor's window.
- Check that your house number is well lit so first responders can find your house quickly in an emergency.

Limit the Hours of Operation

Look for bulbs and fixtures with built-in sensors or photocells.

Choose ENERGY STAR Bulbs

- Purchase ENERGY STAR bulbs. They save energy and meet stricter performance standards.
- Know your bulbs. Lumens are the key to brightness — the more lumens, the brighter the light.
- Read the label. Not all bulbs are rated for the outdoors, outdoor temperatures or for use with specific sensors.

Did You Know?

Most light fixtures are rated for use with old-fashioned bulbs. Since LEDs use just a fraction of the electricity, you won't exceed the safety threshold even if you choose a bulb with higher lumens.

Black Friday How to Shop for Energy-Efficient Products

Black Friday, Small Business Saturday and Cyber Monday are great opportunities to save money on energy-efficient appliances and electronics. However, it's important to do your research beforehand to help you stay focused. Here are some tips to help you get the best deals:

- **Plan ahead.** Make a list of the energy-efficient products you want to buy and research their prices online and in stores beforehand.
- **Set a budget.** Decide how much money you are willing to spend before you start shopping.
- **Look for ENERGY STAR® certified products.** These products meet certain energy efficiency standards and can save you money on your energy bills.
- **Consider the long-term savings.** When you are comparing energy-efficient products, don't just look at the upfront cost. Consider the long-term savings as well. Energy-efficient products may cost more upfront, but they can save you money on your energy bills in the long run.
- **Shop around.** Compare prices from different stores to find the best deal. Websites like Google Shopping or PriceGrabber can help you compare prices from different retailers.
- **Buy online.** You may be able to find better deals online than in stores. However, remember to factor in shipping costs.
- **Read the fine print and ensure you understand the terms and conditions.** Some deals have restrictions, such as requiring you to purchase an extended warranty or service plan.

Lastly, be patient and have fun! You may not enjoy waiting in lines but boasting about the amazing deal you got and saving on your energy bills for years to come can quickly cancel out that pain.

My Bulb Burned Out!

LEDs require additional considerations to ensure a long life. If a bulb burns out earlier than you expect, ask yourself these questions.

- Was it an ENERGY STAR certified bulb? ENERGY STAR bulbs must meet specific quality standards to earn the label.
- Was the bulb in an enclosed fixture? LEDs are specifically susceptible to heat, so if they are in a glass enclosure, a recessed can, or a lamp with a tight shade, hot air can affect the sensitive electronics. Look for a bulb rated for enclosed fixtures.
- Was the bulb compatible with the use? Not all bulbs are rated for outdoor use, or use with a dimmer or photocell.

Tax Credits and Incentives
for Energy Efficiency Upgrades

In August 2022, the federal government created the *Inflation Reduction Act of 2022* — the largest federally funded clean energy and climate change package in US history. The package includes 124 programs addressing agriculture, buildings, manufacturing, renewables, electric vehicles, transportation, forests, and more. These programs provide tax credits, rebates, loans, and grants — some of which may help you save money on your energy bills, reduce your carbon footprint and improve the comfort of your home.

Federal Tax Credits for Residential Energy Efficiency Upgrades Include:

Home Energy Audits:
30% credit up to $150

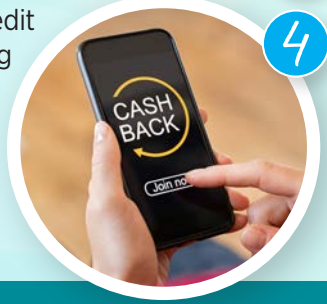
Air source heat pumps:
30% tax credit up to $1,200, and geothermal heat pumps up to 30% tax credit with no cap

Heat pump water heaters:
30% tax credit up to $2,000

Central air conditioners:
30% tax credit up to $600

Building Envelope Components:
Doors — a 30% credit or $250 per door up to $500; Exterior windows and lights — a 30% credit up to $600; Insulation and sealing materials — a 30% credit up to $1,200

See **Federal Guidelines** for a full list of measures, details and important tax credit limits when combining measures. You may want to consult your tax advisor for guidance.



Idaho Power Cash Incentives

Idaho Power offers **cash incentives** for many energy efficiency upgrades.

Go to idahopower.com/save to see what incentives you may qualify for.

Idaho State Resources

The state of Idaho currently offers **low-interest loans** of up to $30,000 for residential energy efficiency improvements.

How to Get Started

If you are interested in making your home more energy efficient, here are a few things you can do to get started:

1. Consider a **home energy audit**. An audit can identify areas where your home can be made more energy efficient.
2. Research the **federal tax credits** that may be available to you.
3. Go to **idahopower.com/save** to discover additional cash incentives
4. Choose the energy efficiency upgrades that are right for your home and budget.

Did You Know?

Idaho Power offers discounted home energy audits. Visit idahopower.com/homeenergyaudit to register today.

Sources:

Federal Income Tax Credits and Incentives for Energy Efficiency|ENERGY STAR: energystar.gov/about/federal_tax_credits

Inflation-Reduction-Act-Guidebook: whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf

Energy Efficiency — Energy and Mineral Resources: oemr.idaho.gov/energy-efficiency/energy-efficiency/

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