What the U.S. DOE Says About Energy Efficiency

Hear it straight from the U.S. Department of Energy!

Here is what they say about making your home as energy efficient as possible in order to save money, reduce energy, and lower carbon emissions.

Insulation & Air Sealing

"Insulate and seal ducts– air loss through ducts accounts for about 30% of a cooling system's energy consumption."

"You can probably reduce your energy bills by adding more insulation. Many older homes have less insulation than homes built today, but even adding insulation to a newer home can pay for itself within a few years."

"Reducing the amount of air that leaks in and out of your home is a cost-effective way to cut heating and cooling costs, improve durability, increase comfort, and create a healthier indoor environment."

"Finding the places where outside air is leaking in, and conditioned air is leaking out, and sealing those leaks is a cost-effective way to improve air comfort and cut energy costs."

"Your air ducts are one of the most important systems in your home, and if the ducts are poorly sealed or insulated they are likely contributing to higher energy bills. Ducts that leak heated air into unheated spaces can add hundreds of dollars a year to your heating and cooling bills, but you can reduce that loss by sealing and insulating your ducts."

Home Energy Assessment

"A home energy audit, also known as a home energy assessment, can help you understand the whole picture of your home's energy use."

"An audit can help you determine how much energy your home uses, where your home is losing energy, and which problem areas and fixes you should prioritize to make your home more efficient and comfortable."

"A home energy audit should be your first step before making energy-saving home improvements, as well as before adding a renewable energy system to your home."

Tune-Ups & Maintenance

"Annual maintenance can help improve your comfort and the efficiency of your air conditioner while prolonging the life of your unit.

"No matter what kind of heating system you have in your house, you can save money and increase your comfort by properly maintaining and upgrading your equipment."

"By combining proper equipment maintenance and upgrades with recommended insulation, air sealing, and thermostat settings, you can save about 30% on your energy bill while reducing environmental emissions."

Programmable Thermostats

"Install and set a programmable thermostat– it could help you save up to 10% on heating and cooling costs a year."

"You can save as much as 10% a year on heating and cooling by simply turning your thermostat back 7°–10°F for 8 hours a day from its normal setting [with a programmable thermostat]."

Heating & Cooling

"Buy an ENERGY STAR–qualified AC unit– on average, they're up to 15% more efficient than standard models."

"You can reduce air conditioning energy use by 20–25% by switching to high-efficiency air conditioners and taking other actions to lower your home cooling costs."

"If your furnace or boiler is old, worn out, inefficient, or significantly oversized, the simplest solution is to replace it with a modern high-efficiency model. "

"[Ductless] mini-splits have no ducts, so they avoid the energy losses associated with the ductwork of central forced air systems. Duct losses can account for more than 30% of energy consumption for space conditioning."

"Energy efficiency upgrades and a new high-efficiency heating system can often cut your fuel bills and your furnace's pollution output in half."

"Upgrading your furnace or boiler from 56% to 90% efficiency in an average cold-climate house will save 1.5 tons of carbon dioxide emissions each year if you heat with gas, or 2.5 tons if you heat with oil."

Water Saving Devices

"The shower is another place with the potential to save a lot of water. Federal regulations mandate that showerheads can't exceed 2.5 gallons of flow per minute, but the very best use 2 gallons per minute or less. Not only can you conserve water by installing a low-flow showerhead, but you can also save energy (and money) on water heating."

Advanced Power Strips

"Installing a smart power strip (or, advanced power strip) in your home is a quick and easy way to start saving money while making your household a little more energy efficient."

LED Lighting

"Good-quality LED bulbs can have a useful life of 25,000 hours or more -- meaning they can last more than 25 times longer than traditional light bulbs. That is a life of more than three years if run 24 hours a day, seven days a week."

"Unlike incandescent bulbs -- which release 90 percent of their energy as heat -- LEDs use energy far more efficiently with little wasted heat."

"By 2027, widespread use of LEDs could save about 348 TWh (compared to no LED use) of electricity: This is the equivalent annual electrical output of 44 large electric power plants (1000 megawatts each), and a total savings of more than $30 billion at today's electricity prices."

"LED is a highly energy efficient lighting technology, and has the potential to fundamentally change the future of lighting in the United States. Residential LEDs -- especially ENERGY STAR rated products -- use at least 75% less energy, and last 25 times longer, than incandescent lighting."

LED Bulb

- Lasts 25k + hours
- Lasts 25x longer
- Uses 75% less energy

Incandescent Bulb

- Releases 90% energy as heat
- Wastes more heat and energy

Resources

https://www.energy.gov/articles/energy-saver-101-infographic-home-cooling

https://www.energy.gov/articles/top-8-things-you-didn-t-know-about-leds

https://www.energy.gov/energysaver/led-lighting

https://www.energy.gov/energysaver/home-heating-systems/furnaces-and-boilers

https://www.energy.gov/energysaver/articles/save-energy-your-household-smart-power-strip

https://www.energy.gov/energysaver/articles/conserving-water-one-drop-time

https://www.energy.gov/energysaver/insulation

https://www.energy.gov/energysaver/weatherize/air-sealing-your-home

https://www.energy.gov/energysaver/articles/5-ways-keep-your-home-comfortable-humid-climate

https://www.energy.gov/energysaver/minimizing-energy-losses-ducts

https://www.energy.gov/energysaver/heat-and-cool/home-heating-systems

https://www.energy.gov/energysaver/weatherize/home-energy-audits